

**Facilitated Learning and Adaptive Systems for Building Business Sustainability: the
Farm Business Resilience Program for WA Farmers**

**Submission for the
25th ANZAM Conference “The Future of Work and Organisation”
7-9 December, Wellington, New Zealand**

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ABSTRACT *Farming businesses are expected to be adversely affected by climate change and have low levels of training. Facilitated learning and adaptive systems training methods for these small and micro businesses were used in the Farm Business Resilience (FBR) Program in 2010 and 2011 to build capacity for business sustainability. In five modular workshops, farmers identified key environmental, social, financial and production challenges with the assistance of trained facilitators. They then had an opportunity to ‘self discover’ potential ‘solutions’ and write strategic plans. Grants were available to assist implementation of priority activities. Results presented relate to the impact of the program, particularly changes in participant attitude, behaviour and expected future behaviour. Conclusions are made about the key characteristics of the process.*

Keywords: Climate change, work life balance, family business, management training / education / development, strategic planning, strategy in SMEs

INTRODUCTION

Australia has one of the most variable rainfall climates in the world, with extreme temporal and spatial rainfall variation (Botterill 2006; Productivity Commission 2009). With much of Australia’s agriculturally important land located in marginal rainfall zones, climatic variability can place immense stress on the agricultural sector (Wilhite 1986).

Despite often trying conditions, agriculture is an important contributor to Australian Gross Domestic Product and exports (S.G. Heibron Pty Ltd 2006, Productivity Commission 2009) and sectoral output continues to increase (Productivity Commission 2009). However, this success can be attributed to a relatively small number of farms, with a third of the largest farms producing 82% of the value of agricultural operations in 2005-06 (Productivity Commission 2009). There is a strong correlation between farm performance and the vulnerability of the farm to drought (Productivity Commission, 2009). With drought a recurrent, natural feature of the Australian landscape (Botterill 2000; Huda and Evans, 2009; Productivity Commission 2009; Wilhite 1986), the farming sector must be able to readily adjust to changing circumstances for it to remain successful (Wilhite 1986). Improving capacity (knowledge, understanding and skills) within the agricultural sector is an important part in achieving this ability to adapt to changing circumstances (Industries Development Committee Workforce, Training and Skills Working Group 2009).

TRAINING IN RURAL/REMOTE AREAS

Traditionally, the agricultural sector has placed a lower emphasis on education and training, with practical experience considered of greater value (Kilpatrick 1997; Industries Development Committee Workforce, Training and Skills Working Group 2009). This is reflected in lower levels of post high school and university education in Australian agriculture than other industries and the population as a whole (Table 1) (Australian Productivity Commission 2005). However, farm businesses that participate in training events, such as workshops and seminars, are likely to be more profitable and adapt their practices to improve performance (Kilpatrick 1997; Industries Development Committee Workforce, Training and Skills Working Group 2009).

Training providers servicing the agricultural sector face a variety of challenges, which are exacerbated by the geographical context. Being located in regional, rural and remote locations requires agricultural businesses to ‘sacrifice’ time and money in order to attend training, which is generally held in the larger towns or service centres (Industries Development Committee Workforce, Training and Skills Working Group 2009). As such, the value for money—that is, the direct correlation between the training and financial benefits to the business—must be clear (Industries Development Committee Workforce, Training and Skills Working Group 2009).

The Industries Development Committee Workforce, Training and Skills Working Group (2009) undertook a ‘stocktake’ of past agricultural training programs across Australia. The stocktake revealed the following as important factors influencing the effectiveness of training programs:

- Good management, administration and dedicated staff;
- Appropriate and reliable funding;
- A focus on a particular target group;
- Quality information and delivery;
- Engagement and consultation with the industry;
- Industry ownership of the issue; and
- Locally-relevant information and solutions/strategies.
- Flexibility in the delivery

These findings align with those of other studies (see Kilpatrick et al. 1999).

Facilitated learning is a process where trained facilitators assist small groups of people in the learning process and has similarities with group learning and action learning processes. Facilitated learning is useful for learning about complex concepts, where input is needed from multiple people simultaneously and to gain tacit knowledge that cannot be easily described but only learnt through experience in the specific context.

THE FARM BUSINESS RESILIENCE PROGRAM

The Farm Business Resilience (FBR) program is delivering one of seven new drought policy measures being piloted within Western Australia. The new policy measures were developed in response to a comprehensive review of drought policy that identified the ‘short-term, crisis-framed response’ (Drought Policy Review Expert Social Panel 2008: 7) employed by government to assist farmers, rural communities and small businesses affected by drought, as an ineffective long-term approach (Drought Policy Review Expert Social Panel 2008; Productivity Commission 2009). Hence, the program is investigating ways to replace the support mechanisms for farms that have historically been available through ‘Exceptional Circumstances’ (EC) processes. The FBR aspects of the Pilot have been managed by Curtin University in partnership with the Department of Agriculture and Food WA (DAFWA) and the West Australian Rural Business Development Corporation.

Although building an environment of self-reliance and preparedness in relation to drought within agricultural Australia has been the focus of drought policy since 1992, this has since been broadened to ‘encourage adoption of appropriate climate change management strategies’ (Department of Agriculture Fisheries and Forestry 2010).

With climate predictions pointing toward a drying climate (see Hennessy et al. 2008), it is highly likely that drought will become a more common feature of the Australian landscape, and a scenario that landholders will need to prepare for. The impacts of drought can be far reaching and have consequences across social, economic, political and environmental spheres. For many farm families, farming is not just a job—the farm is their home (in some cases, for generations) and farming is their

identity (Productivity Commission 2009). Separating the 'farm business' from the 'farm family' is unwise—issues that affect the farm business affect the farm family, and vice versa (Productivity Commission 2009). Agricultural drought can have enormous impacts on individual farm productivity and profitability, which can have severe emotional impacts on the farm family. In turn, the social vibrancy of rural communities can be affected (Productivity Commission 2009). Drought can result in loss of jobs, closures of small rural businesses and reduced employment opportunities, particularly in non-agricultural sectors (Horridge et al. 2005). It can lead to people moving from rural areas to the larger cities (Productivity Commission 2009).

In light of the challenges facing agricultural Australia, farm business skills need to extend beyond the 'practical experience' that the sector traditionally values and into the realms of business management and leadership (Industries Development Committee Workforce, Training and Skills Working Group 2009). An important aspect of this is the development of the sectors' risk management and strategic planning skills to address the environmental and social aspects of the business as well as the financial side, and understand how these realms operate and interact.

The FBR program utilises adaptive systems theory (Dooley 1997; McElroy 2000; Moore 2009; Olsson et al. 2004) to support the 'facilitated learning journey' undertaken by the farmer participants in delivery of the Farm Planning elements of the Pilot. In light of this, an Adaptive Research Framework was used to examine the mechanisms that were piloted.

FBR Farm Planning consisted of five modular workshops held in locations that were usually within one hour travel from the farm businesses base location and an optional on-farm 'kitchen table' session. Participants were taken through an adaptive process that identified their key challenges in managing the various environmental, social, financial and production attributes of their businesses. The adaptive process was centred on a facilitation process (one trained facilitator per three farm businesses attending the training) that focused on listening to and assisting in the documentation of the participants challenges. What followed was an opportunity for participants to 'self discover' potential 'solutions' to their challenges. This self-discovery journey, where applicable, made further use of an integrated and adaptive facilitation process, with associated technical support materials relevant to the issue/s available for consideration by the participant. Potential solutions then formed

the basis of the documented strategic plans. The strategic plans focused on three key theme areas: managing the natural environment and production, balancing work-life commitments and managing financial resources. The strategic plans included the identification of priority activities to help farmers be more self-reliant and prepared to face a changing climate. A grants program (Building Farm Businesses) was available to assist those businesses that completed the Farm Planning to help implement priority activities identified in their plans.

Training has been an important component of policy for many years—for example, in 1994 the Senate Rural and Regional Affairs and Transport References Committee recommended that ‘skills enhancement, including education, training and access to professional advice, should become the principal component ...’ in the medium to long-term (Botterill 2000 p8), and ‘Support for training and improving farmers’ management and decision making capacity, particularly their ability to deal with risk, should be a central focus of future rural adjustment strategies.’ (McColl et al. 1997 cited in Botterill 2000 p3).

The actual impact of training can be varied, depending on a number of factors such as farmer attitude toward learning and their perceptions of the credibility of the information and/or the trainer (Botterill 2000; Pannell et al. 2006; Pannell 2010). The first hurdle to overcome was getting the farmers to attend the training events. In the case of the pilot drought policy measures, financial incentives were at the outset a distinct incentive to attend. Only farmers that attended the training were able to access grant money through the ‘Building Farm Businesses’ program. Nearly half of participants (44%) entering the Farm Planning program indicated that a primary reason for participation was accessing the associated grants program. However, on completion of the program, only one quarter of the participants (26%) saw access to the grant program as a primary reason for attendance. Furthermore, participants of the training were reimbursed any out-of-pocket expenses, such as travel and accommodation. Financial incentives have been found to be an important factor for gaining farmer attendance at training sessions (Bowyer and Heath 2009; Heath et al. 2010b).

For the training to be successful, the information presented has to be credible, reliable and legitimate (Pannell et al. 2006). This may have posed a problem for the pilot FBR program because the training was to include information on ‘managing a changing climate’. While Evans et al. (2011) found a third

of WA farmers and agribusiness (32%) agreed climate change was occurring, more were uncertain (52%) and less than an third (31%) thought climate change was a threat to their business. These findings were found to be related to the perceived credibility of scientists and government, with less acceptance of climate change among those with greater agricultural experience (Evans et al. 2011). Climate change is a contentious issue, and even those farmers that believe it to be true are unlikely to address the issue (Pannell 2010). In addition, the characteristics of climate change (slow, subtle relative to climate variability, diverse spatial impacts) will make it difficult for farmers to be enthusiastic about making changes to reduce future risks (Pannell 2010). Furthermore, appropriate management strategies or practices to address climate change issues may not be available and, if they are, will be difficult for farmers to evaluate. Nevertheless, for natural resource management (NRM) issues, it has been shown that improving the 'future farm planning' skills of farmers is an important part of building farmer capacity and results in the adoption of appropriate management strategies (Lyle and Ostendorf 2005).

Grants have historically been an important incentive to achieve on-ground change, particularly in the realm of NRM as they help overcome the key barrier of 'financial risk' (Bowyer and Heath 2009). However, the processes used to deliver these types of measures have often impeded their use. In particular, imposed timeframes, caveats and complex application procedures have prevented or discouraged landholders from making use of the available funds. External factors, such as poor seasonal conditions, also play an important role in the ability of farmers to implement on-ground actions, even if the money to do so is available (Bowyer and Heath 2009). Another important factor is the availability of technical support to assist with implementation of the on-ground works, or to provide technical advice on the management aspects. Studies have shown that where practices have not been successful, farmers can dismiss the practice without full knowledge of what went wrong and possible ways to achieve better results (Bowyer and Heath 2009; Heath et al. 2006; Heath et al. 2010a).

EVALUATION OF THE FBR PROGRAM

Bennett's hierarchy (Bennett 1975) can be used as a framework to evaluate the effectiveness of training. The hierarchy represents a cause-and-effect chain of outcomes resulting from an intervention—in this case, a training program. The hierarchy theorises positive participant reactions to the intervention result in increased capacity (i.e. knowledge, attitudes, skills, aspirations, confidence). In turn, increased capacity leads to changes in behaviour which then results in high-level social, environmental or economic consequences. The Farm Business Resilience program used facilitated learning to change the attitudes of farm businesses toward strategic planning and climate change, and endeavoured to highlight the linkages between environmental and social aspects of the farm with the businesses productivity and financial performance.

To assess the response to the program, one person from each business completed a survey prior to entering the program and after completing the program. This was done either over the internet or in hard-copy form. Of the 400 businesses in the program, a total of 355 businesses completed program entry surveys (89% response rate) and 303 businesses completed program exit surveys (76% response rate). All of the businesses were family businesses with most being 'micro' sized businesses of less than 5 people. No corporate farms participated in the program.

In addition, surveys and feedback discussions sessions were conducted at the end of each of the five workshops, with data collected from each participant. End-of-day surveys were collected from 144 workshops involving between 316 and 366 respondents. Surveys from 16 of the 160 workshops (10%) were misplaced.

Much of the data collected from participants was feedback about the content and processes used in the program and the facilitators involved. This was used to adapt the program to better meet participant expectations and needs. This paper reports the overall assessments of the program in terms of changes in attitudes, current behaviour and expected behaviour. It was hypothesised that the facilitated learning process used in the program would result in a positive change in participant attitudes and behaviour during the training period as well as participation in the training and planned future activities. With categorical data scales the statistical significance of comparisons were made using Pearson chi square statistics and, for ordinal data scales, Kendall's tau was also calculated. For metric data scales, comparisons were assessed using paired sample t-tests.

RESULTS

There was a shift in attitude in terms of how well participants thought they were prepared for drought and climate variability, and their confidence in the future viability of their farm (99% statistical confidence). There was a change from only one in five (21%) to over half (55%) of the participants stating they thought they were prepared or well-prepared for drought and climate variability after participating in the program, with half (49%) increasing their level preparedness. It was noted that prior to the program nearly half the participants (48%) were uncertain about climate change, and only one quarter (27%) believed climate change was occurring. These findings are similar to an earlier study in 2008 undertaken by Evans et al (2011). After completing the program, a third of participants had increased their confidence in the future viability of their farms (35% increased and 3% decreased), with most participants (83%) feeling confident or very confident (up from 62% prior to the program).

In terms of behaviour, prior to the FBR program there were low levels of exposure to the use of documented strategic plans (36%). At the end of the average six to twelve weeks involvement in the program, nearly all participants (92%) had a written strategic plan that covered more aspects of the farm business than any plans they had prepared prior to the program. There was a significant increase in the frequency in which the strategic plans were expected to be referred to, and in the participants' confidence in being able to update the plan in the future. In addition, participants expected to attend training related to the business in the future more frequently than they had in the past.

An outstanding indicator of the acceptance of the adaptive facilitated learning approach and its effectiveness, was that less than five per cent of the 400 businesses 'dropped out' once commencing the first workshop – in other words 95 per cent of businesses completed the program. This is a largely unprecedented outcome for any program intended to support farm businesses in Australia.

DISCUSSION AND CONCLUSIONS

Management education endeavours to assist managers to work effectively in meeting many of the challenges that will confront farm businesses. The challenges range from farmers sustaining

themselves in changing environmental, economic and social settings, to meeting value chain requirements for certification of sustainability (Seymour et al. 2007, Noonan et al. 2011).

Efforts to provide training in rural and remote locations to primary producers have historically provided many challenges to policy makers, academics, extension agents and training deliverers alike.

The novel approaches reported here have enabled an unparalleled uplift in change management in agricultural settings. A new paradigm has been crafted by bringing together the strongest elements of group facilitation and discovery learning processes, coupled with contemporary information dissemination methods, to address complex and often confronting issues relating to climate change, personal and financial health, relationships and the resilience of farm businesses.

While still only early in its development, the pilot of drought reform measures that have been delivered under the FBR program have shown remarkable attitudinal change and have brought about the early signs of substantive practice change in the 400 farm businesses that have been engaged in the program from April 2010 to July 2011.

The program addresses many of the issues surrounding the delivery of training in regional, rural and remote areas of Australia. On reflection, some key aspects of the program and its success to date, in comparison to previous training undertakings, were:

- The focus on facilitation as the paradigm leads to farmers undertaking a learning journey rather than training, with the learning journey more likely to build commitment to the Strategic Plan and behavioural change;
- The use of affective learning domain processes (discovery journey) as the primary vehicle to bring about change rather than the use of traditional cognitive domain methods (chalk and talk);
- A central focus on the completion of a robust Strategic Plan that is built throughout the five modules, and assisted by a single page 'Strategic Plan at a Glance' template;
- Addition of a 'kitchen table' or individual session to assist enterprises to move to implementation of the Strategic Plan;

- Requirement of a robust Strategic Plan as the rationale for any grant application;
- The team approach (a Lead Facilitator, 3 – 4 supporting Facilitators plus topic technical specialists) allows facilitators to work intensively with three farming enterprises at any time amongst a group of 12 to 15 farming businesses;
- Greater opportunities for farmers to share stories and insights in very small groups and to learn from each other;
- Delivery team structured to provide both process and content;
- Team-based approach encourages peer learning and cross-pollination between facilitators, which results in a continual improvement cycle;
- Facilitation delivery based on internationally recognised core competencies for facilitators;
- Coaching, mentoring, pre-briefing and debriefing systems built in for continual improvement;
- Facilitators are required to complete their own personal Strategic Plans in training sessions prior to asking participants to complete Strategic Plans; and
- Rural-based trainee Facilitators within delivery teams, drawn from participants who have completed the program and who are willing to become ‘champions’ for the program.

Further research is required to assess the medium and longer term impacts of the program on the participants, as well as the impact on their communities. In addition, the profile of participants could be assessed to determine if the impact differs for various groups of participants.

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Table 1 Post High School and University Education by Sector in Australia

Sector	Post High School Education	University Education
Agriculture	39%	7%
Mining	65%	17%
Services	59%	24%
Total	58%	22%

Source: Australian Productivity Commission (2005)