CRITICAL SUCCESS FACTORS UNDERPINNING INDUSTRY VISITS IN FARM MANAGEMENT EDUCATION

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Abstract

In parallel with other applied disciplines, education in Farm Management needs to combine the exposure of students to theoretical frameworks as well as to situations where practically applied knowledge can be experienced and explored. Over the past 33 years, programs at Orange Agricultural College have used farm and industry visits as a strategy to enhance formal classroom activities in Farm Management education. Carefully designed tours enable students to observe, interview and listen to the experiences of practising managers in a manner that enables them to build awareness of applied management in a variety of "exemplary" farming and industry situations. Such engagement assists the student in their personal learning process as they reflect on what they see happening, how it happened and why. This paper builds on a broader paper that initially explored how constructive alignment between curriculum, assessment and tour design is critical in achieving learning outcomes. From this base, it focuses particularly on research that has sought to capture the experience gained through Farm Management programs over the past 3 decades at Orange Agricultural College. Emphasis is placed on combining learning outcomes for the student with the role of academics involved and with the industry co-operator visited and the early approach of Information Gathering is contrasted to the current best practice of Student Authorship. Such a tripartite connection enhances the conditions for creating more meaningful learning experiences and, over time, builds a richer sense of community for all involved.

Keywords: Student Tours, Farm Management Education, Rural Community

Introduction

The purpose of this paper is to report on research that has attempted to capture the perspectives and success factors underpinning the extensive use of farm and industry visits within the curricula of a single institution, Orange Agricultural College during the past three decades. As an introduction, a brief background will be given of the history and current situation of this institution and its curricula which provides a context for this research. Next the rationale and significance of this research will be outlined, together with the research methodology chosen. This will involve a brief discussion of two approaches to farm and industry tours that characterise a significant evolution in Orange's tour operations through time. These approaches will then be contrasted using a tabular format. The format will provide a template for subsequently discussing the research results and offering conclusions from this case study that could be helpful in undertaking successful farm tours and industry visits.

Background

The School of Rural Management (SRM) began as Orange Agricultural College in 1973 to provide management education to rural Australia as distinct from the prevailing science based agricultural education of that period. In 1994 it became a University College of The University of Sydney and in 2006 joined Charles Sturt University as the School of Rural Management.

The original charter of Orange Agricultural College was to train graduates who could develop their future careers as farm managers. In the mid 1980s this was complemented by Rural Business Administration and subsequently by Horticulture, Land Management, Agricultural Commerce, Management, Equine Studies and Ecological Agriculture in the 1990s.

A strong vocational alignment of Orange to rural and allied industries provided a curriculum context for the extensive use of tours to farm and industry co-operators to enhance the learning experiences of students. Students were transported in coaches or smaller buses and tours could last from half a day through to a 'long' five day tour.

Next we consider the rationale and methodology that underpinned recent research into tours offered by Orange.

Rationale and Methodology for Research into Tours and Industry Visits

The rationale behind research into tours at Orange stemmed from a number of factors and perspectives that came into focus during 2006 for Orange as an institution:

- in the past 5 years many factors had contributed to fewer tours being organised across Orange curricula
- even though tours had been part of the curriculum for three decades, very few of these tour experiences had been clearly documented
- there was a pressing need to undertake this documentation as much of the accumulated knowledge and experience in this area existed with staff soon to retire or with those who had recently retired. Due to the recent merger with Charles Sturt University in July 2006, redeveloped courses were also seeking to utilise industry case studies more extensively. Any research that identified success factors would be helpful in undertaking this development.

As a response, a three day, Staff Development Tour (SDT) involving ten academic staff (approximately 80% of the School of Rural Management) was organised in 2006 to key industry co-operators.[3] The tour was designed to involve and expose academic staff to a best practice model of tour operation which is discussed in more detail in the next sections.

Time during the SDT was allocated to reflect on past tour experiences and to debate the future role of tours within the curriculum. A facilitated discussion including small group work sessions was held during a two to three hour period on the second evening of the tour. This was complemented by further reflections, discussions and debates which lasted approximately 2 hours during the final day. The outcomes of these sessions were recorded through notetaking.

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[3] Acknowledgement is given here to Chris Morgan and Rod Cox , Lecturers in the School of Rural Management, Charles Sturt University, Orange, who designed and implemented this Staff Development Tour.

In a separate research study, a group of five rural cooperators who had assisted Orange in mentoring management students on their properties was asked to reflect on their impressions of participating in this mentoring program. They were asked to identify both positive and negative aspects of this program from their perspective. Their reflections were tape recorded and subsequently transcribed for evaluation.

Characterising Tours: An Evolution Of Practice

In this section, the evolution of tours within the Orange institution is briefly outlined to serve as a platform for subsequently analysing and discussing the research results.

The decades of the 1970s and 1980s represented a significant foundation stage for tour operations at Orange. Tours during this phase could be broadly characterised as essentially *Information Gathering* in nature although some tours in horticulture involved students directly learning specific horticultural practices. Typically, students would receive a briefing prior to visiting the agricultural operation. At the site via pre-prepared questions they would interview the cooperator, collect the information provided and synthesise this with their own on-site observations. As individuals or groups they would analyse this information and subsequently present their findings via an assessable verbal presentation, a written assignment or an exam.

The advent of new curricula such as Agricultural Commerce, in the early 1990s, precipitated a re-evaluation of tours at Orange. Staff had become increasingly dissatisfied with the shortcomings of the Information Gathering approach which are reviewed in the next sections. They wanted to rationalise the time students spent gathering descriptive information and focus more intensely on interpreting theory models. These involved synthesis and evaluation which were higher order outcomes in terms of Bloom's learning taxonomy (Bloom et al, 1956) and could be required at later stages of the curricula (Roberts et al, 2003). It was also recognised that tours needed to be an incorporated into the design of entire curricula for course programs rather than being positioned as ancillary to the subjects and interdisciplinary perspectives.

Despite this progress, however, at the commencement of the new century there were still significant limitations with tour operations that encouraged some academics at Orange to consider further evolution in tour design. These largely related to finding methods of seriously engaging all students throughout the entire tour experience. The outcomes are reported by Morgan and Cox (2005) and represent a snapshot of current best practice in tour design and operation at Orange. Their model which focused on Self Authorship (Morgan, 2006), integrated assessment into the fabric of an entire tour and called for new approaches for framing the roles of academics, cooperators and students.

The following sections of this paper report on the research outcomes which emerged from exploring the evolution of tours at Orange.

Analysing the Evolution of Tour Approaches at Orange and Discerning Success Factors

A tabular format has been chosen to summarise the outcomes of this research into realising the educational potential of tour activities at Orange. In Table 1, the second column depicts the earliest tour approach of *Information Gathering* while the third column depicts the latest approach of *Self Authorship.* The first column consists of a series of factors that inductively emerged from the research undertaken and are helpful in typifying these approaches. For brevity and contrast this typology presents the extremes only of the evolution of tour practice during three decades at Orange and does not attempt to present the intermediate stages discussed above.

Table 1: A typology of tour approaches at Orange

TYPOLOGY FACTOR	*Information Gathering Approach*	*Self Authorship Approach*
Course Rationale	To describe and experience a variety of rural operations and situations/link theory to practice	Opportunity for: praxis in the curriculum/ integrating tours within subject design
Educational Philosophy	Information transmission from cooperator to students/ some analysis and evaluation according to theory	Opportunity to implement espoused educational philosophy of being experiential and constructivist to achieve student Self Authorship
Educational Process	Visit/observe/take notes/ complete post tour assessment	Visit, pursue, collect, analyse, synthesise and evaluate information via. active assessment during tour
Student Skills	Observation, questioning, notetaking, description, evaluation, teamwork, assessment presentation	Observation, questioning, notetaking, description, evaluation, assessment presentation, plus situational leadership and rapid decision making
Perspectives: Student factors	Them and us vs. us and us/ camaraderie/ freedom from classroom / access to best practice situations	High satisfaction with subject and teaching approach/ opportunity for managerial decision making/ 'pushed' via active assessment to develop inquiry skills
Perspectives: Academic Staff	Positive Learning for themselves/positive connection to rural community peers and practice/ positive self esteem/fears about workload, student control, legal exposure, and lack of deep student learning	Positive Learning for themselves/positive connection to rural community peers and practice/ positive self esteem/fears about workload, student control, legal exposure, and informal assessment of the knowledge base of the academic
Perspectives: Cooperators	Opportunity to give something back to agriculture /fear of academic experts and students, of exposure of their operations to visitors, of being asked to discuss uncomfortable issues	Directly involved in learning and assessment strategy before and during the tour/ seeking further student visits due to positive outcomes
Perspectives: Rural Community	Network based awareness of the role of Orange as an involved rural educator /a raised profile for education in agriculture	Network based awareness of the role of Orange as an involved rural educator /a raised profile for education in agriculture / positive view of student inquiry skills

In the following sections the typology outlined above will be discussed to contrast the Information Gathering and Self Authorship approaches. Outcomes from the research conducted under the SDT will be incorporated into the various sections and references will be made to other recent papers on the Orange tour experience.

Course Rationale

The course rationale for tours using the original Information Gathering approach was outlined in earlier sections. It is important to reiterate that the value of tours during this initial stage of Orange's operations was perceived to lie in the exposure of students to authentic contexts, and to offer them access to variety of case study opportunities. Through reflecting on the past three decades, participants in the SDT observed that to be effective, tours now needed to be fully embedded into the design of relevant subjects within each curriculum. The evolution of curriculum design at Orange had now embraced the notion of 'praxis' which conceptualises a relationship between both theory and practice so that neither predominates at the expense of the other (Mesirow, 1991).

Educational Philosophy

The educational philosophy underpinning the early Information Gathering approach was essentially one of information transfer. In the case of tours, cooperators rather than lecturers became the transmitters of information. As time progressed, this educational emphasis shifted from description and comprehension to analysis and evaluation according to theoretical principles that the students were encountering in the lecture program. SDT participants commented however, that even tours based on this philosophy had serious shortcomings in terms of creating surface learning rather than the desirable deep learning in which students demonstrate the ability to focus on what is 'signified' via evidence and argument from contextual experience rather than merely seeking to complete an assessment task (Marton and Säljö,1976, Ramsden, 1992). Recalling the surface learning situations of early information gathering tours, some lecturers on the SDT went so far as to label some (but not all) tours as 'junkets' where most of the learning was achieved by lecturers preparing for the tour rather than by the students who attended (Bone and Watson, 2006).

By contrast, Morgan (2006) characterises the most recent tour approach at Orange as 'Self Authorship' whereby students are encouraged to experientially define their own beliefs, identity and relationship with the world. Under this approach, knowledge is accepted as personal and relative and determining a 'best answer' is seen as requiring analysis of relevant evidence according to context. Learning is therefore understood as the construction of meaning (Bednar et al, 1992) and it is the role of academics to assist students with this construction rather than primarily seeking to be the transmitters of propositional knowledge (Cochrane et al. 2002).

Educational Process

There are some close similarities between the educational processes used by both approaches in Table 1. The steps of visit/observe/take notes are common; however, there are profound differences in the assessment process. Under the Self Authorship approach, assessment occurs during the situational visit. Morgan (2006) and Morgan and Cox (2005) discuss this in detail for the subject Livestock Management within Orange's Farm Management curriculum.

It is instructive to summarise the elements of this assessment here as they hold the key to unlocking the creation of Self Authorship. Key features of this active assessment are that after an initial overview and inspection of the operation which is guided by the cooperator, students working in groups of six set out to

construct a proposed livestock management calendar for the property, determine appropriate livestock specifications for livestock enterprises being managed and create a marketing strategy for these products.

A vital element of this assessment process is that the cooperator is instructed prior to the visit not to volunteer information on areas that the students are addressing. However, students are encouraged to draw from their accumulated prior experience and apply their own observational skills via questions such as: *What do you estimate the body weight of these cattle to be?*

After 2-3 hours of separate preparation (which includes appropriate academic and cooperator assistance) each student group orally presents their findings and is assessed as a group by the academics and the cooperator. Using Likert scale scoring based on an approach by Healy and Addis (2004), students in each group also anonymously peer assess each other and this is applied to their group mark as a weighting to calculate their individual final mark. Under this process students have an incentive to ensure their group scores highly from the academics and the cooperator and an incentive to impress their other group members concerning their personal contribution (Morgan and Cox, 2005). A general debriefing takes place once all groups have presented. Here the cooperator reveals the actual management calendar, product specifications and marketing strategies and comments on the applicability of points made by the group presentations. The process is repeated at subsequent properties and student group membership is rotated.

Student Skills

In both approaches in Table 1, the student skills of: observation, questioning, notetaking, description, evaluation and assessment presentation are common. The Self Authorship approach nevertheless extends these to embrace situational leadership in which students are required to rapidly focus all their acquired knowledge and energies to address their assessment tasks in a team environment, knowing that their peers in the subject are confronting the identical set of assessment circumstances. These conditions provide an opportunity for Self Authorship to flower and a student feedback comment quoted by Morgan and Cox (2005, p70) exemplifies this: *"This tour approach makes us not to be so reliant on lecturers, we were forced to develop our enquiry skills and observational skills".*

Perspectives: Student factors

Morgan and Cox (2005) and Morgan (2006) comprehensively identify how tours can be a positive experience for students: through peer-to-peer and student-to-academic staff interactions via social exchange and rapport; through freedom from classroom environments; through authentic contexts which amplify student interest, curiosity, appreciation and retention; and through the comprehension that reality is not as one dimensional as theories can imply. Staff on the SDT also nominated student requirements for 'good food', 'good showers' and reasonable accommodation as well as their access to rural situations not readily available to them as individuals, together with the desire for novelty in experiencing new environments and places. These positive factors can be offset by: the financial and time cost to students who may have work and have other study commitments; having to put up with staff they might dislike; needing to conform to group norms as well as to rules for acceptable behaviour in the group; a sense of boredom during tour travel or sensing that some activities are a waste of time. Poorly planned, poorly structured and poorly implemented tours can produce these negative outcomes as they can with lectures or tutorials. However, comments from staff on the SDT suggested that these negative factors can be more readily produced through tours that have an Information Gathering approach. As mentioned in an earlier section, student feedback from the Self Authorship tours has been highly positive which suggests that student engagement and involvement on such tours is qualitatively different.

Perspectives: Academic Staff

The issues raised for academic staff are similar for both tour approaches. These include: positive learning for themselves; a positive connection to the rural community, to academic peers and to authentic practice; and positive self esteem. Fears are connected with: high organising workload; student control; legal exposure; and whether deep student learning will occur. These issues are extensively discussed by Morgan and Cox (2005) and Morgan (2006). A major point of difference lies however in the way the tour approaches in Table1 utilise the knowledge base of the academic. Under the Information Gathering approach, the knowledge role of the academic is overshadowed by the focus on information transmission from the cooperator. Morgan and Cox (2005, p.67) capture the possibilities here when they state: *"Some observers may view student tours to farms as providing easy workload credits for academics who spend much of their time as passengers or overpaid bus drivers and who leave much of the work to the farmer cooperators"*. By contrast, the knowledge role of the academic in the Self Authorship approach is critical – so much so that a fear of academics involved in these tours is that their knowledge is under direct, informal scrutiny by the commercial cooperators, students and academic peers travelling with them.

Perspectives: Cooperators

Staff on the SDT identified that cooperators had often become involved in successive student tours because they wanted to give something 'back' to the future of their industry and enjoyed contributing to the student learning process. This was endorsed through comments made by all five farm cooperators involved in the student mentoring program at Orange. For example one cooperator commented: *"I do like passing on what I call valuable experience. It's 50 years I've been on the land."*

SDT staff also identified fears for cooperators of having to interact with academic experts and students, the exposure of the inner workings of their operations to visitors, and being asked to discuss uncomfortable issues in open forums. These fears could be present with both approaches in Table 1 but Morgan and Cox (2006) note that the direct involvement of cooperators within the active assessment strategy under the Self Authorship approach creates a very positive dynamic. Feedback here from cooperators indicates that they learn from and highly value the considered evaluation and suggestions that stem from the student assessment presentations. This translates into cooperators actually contacting the academic tour staff requesting that they be placed on the list for future student visits. Similar comments were recorded by two of the five rural cooperators working in the student mentoring program. One commented on the experience of "…*having young people and listening to them, I've always enjoyed that because they've always got a different perspective on things.*"

Perspectives: Rural Community

Student tours provide a unique opportunity to build networks between an academic institution and its rural community. Over the past three decades the ongoing contact with cooperators has meant that the community profile of the institution has been expanded and renewed. This reached a peak during the late 1980s and early 1990s when the institution regularly held an annual Cooperators' Weekend where cooperators were subsidised to attend seminars and a major dinner at the institution and were publicly thanked for their involvement. This recognition worked both ways as cooperators were in turn frequently involved in institutional advisory committees, in curriculum reviews and in facilitating visiting speakers from Orange to their localities. Student tours provided the glue that cemented so many of these relationships and assisted some cooperators to influence their sons and daughters (or those potential students they networked with) to study at Orange either as internal or as distance students.

Conclusion

The intent of this paper has been to report on research that has sought to capture the perspectives and success factors underpinning the extensive use of farm and industry visits within the curricula of a single rural education institution at Orange during the past three decades. What has been learned is the importance of creating an evolving course rationale for student tours, which embraces a changing educational philosophy and an ability to keep abreast of the needs and fears of students, academic staff and cooperators. Clear contrasts can be drawn between the early Information Gathering approach and the most recent Self Authorship approach which involves active, on-tour, assessment and addresses many aspects of experientially involving students, lecturers and cooperators in immediate, constructive inquiry. A well designed student tour program which recognises the value of relationship building, has the power to also create close associations between an educational institution and its rural community.

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