

**Stories of learning and change—more  
than can be said**

**The practical implications of a study  
of northern Australian pastoralists  
learning processes**

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A study of northern Australian pastoralists learning processes**

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## 1.0 Introduction

It is always exciting to talk to people and find out how they go about learning - whether this learning is for particular projects or about life itself, all the stories are different. In 1998/99 a group of researchers went out and talked to 18 pastoralists from northern Australia to discover how they went about making changes on their properties. They collected stories that showed how these people went about gathering information and learned to make these changes.

There is a lot of commonsense and wisdom revealed in the stories and this paper tries to capture the essence of the pastoralists' learning processes and then considers the implications for extension workers. The findings of the research, outlined below, are based on the responses of these pastoralists.

Although these findings are particular to these pastoralists, many of their responses about learning maybe very familiar to us. They are offered here as grounds for further thought when we discuss learning and in particular how we might best support the learning of pastoralists.

## 2.0 How pastoralists went about learning

A range of findings emerged from the information provided by the pastoralists who participated in the study about how they went about gathering information and learning. These findings tend to overlap and interrelate and are based on the stories that the researchers gathered from the pastoralists.

### ***The learning processes of the pastoralists tended to occur in an ad hoc and apparently disordered manner.***

For pastoralists, informal learning and the gathering of information generally occurred in an eclectic, and at times opportunistic, way. It is also evident that it is connected to the pastoralists' immediate perceived needs. In other words, when we learn through informal processes it takes place in 'real time' as we manage and operate on a day-to-day basis. When we have the time and the need, we then work on aspects of our learning, whether that be gathering information, discussing our ideas with others, or trialing an idea.

For instance, one pastoralist in the study had been thinking for some time about the idea of cell grazing. Opportunistically he happened to meet an old college friend who had experience in the area, this then provided the impetus to try it on his property. He did so as time and the opportunity to gain further information allowed. In this way, over time he built his learning into his practice. This process was not a linear or concentrated one, but a somewhat fragmented, yet holistic one.

### ***Elements of learning, such as developing ideas, gaining information, and gathering examples from practice and trialing, can be occurring concurrently.***

As described above, we can be pursuing elements of our learning in an ad hoc way. Different aspects of such learning can also be pursued at the same time. We can be attending a meeting and discussing our ideas, at the same time accessing further information, while trialing those ideas on our properties. Thus, informal learning is not a

linear process, but a holistic one with intersecting elements. As the above example regarding cell grazing demonstrates, the pastoralist was seeking information, trialing it on his property, while continuing the normal property operations.

***Informal learning as an individual process, with highly individualised actions, operates in the domain of common sense knowledge which is rarely questioned or reflected upon by the individual.***

As we can see from the above, informal learning processes (like seeking information from friends or groups, trialing the information and knowledge we have, etc) are carried out by the individual. The pastoralists are the ones making decisions about what they should do, what information they need to gather, where the information might come from, and the like. The pastoralist who developed an electric fence system, for example, gained information from helicopter pilots, a formal group meeting he attended provided a crucial piece of information, he sought information from contractors and used a service agent to construct the droppers he used. Throughout these actions, the pastoralist was making decisions about what the next step would be and when it would happen. Such individualism seems to be particularly the case with pastoralists who, we need to remember, are often very isolated from ‘co-workers’ (pastoralists certainly believed that their property and its operations were idiosyncratic). Such informal learning processes are heavily based on personal contact and interaction, for example, networking, using informal mentors and group situations. These actions and interactions are so common with us that we tend to take them for granted. They become common-sense actions and, as individuals, we do not generally interrogate or reflect on them (which has its problems as identified below).

***Time taken to learn and make changes is fluid and is open to demands on the individual concerned and the context in which they work.***

The individual nature of learning also influences the time and timing characteristics of pastoralists’ learning. The time that learning projects take is extremely variable, with some projects being almost continuous as improvement is sought. In the stories that pastoralists told, learning projects could take many years to come to fruition, in other cases they could be devised, planned and put into operation in a very short time frame, or, in still other cases be ongoing, as they sought to improve their ideas. The time taken for different learning projects was influenced by such factors as chance (meeting an old college friend), opportunity (the current farm workload), being able to access the appropriate information and the like.

Timing, closely linked to the time taken to carry out a learning project, is also a difficult factor to ‘pin down’. It is, however, an aspect of the pastoralist’s business and priority setting. It also has an opportunistic element to it. At times, for example, an event occurs, or a meeting takes place, which inspires or promotes the opportunity to begin, or continue more vigorously, a learning project.

Similarly, the timing of when information access takes place, or action is taken, depends on a range of factors within the individual’s context (such as workload, acts of serendipity, opportunity to access information or advice, or the priority of the project). It follows that issues of timing must necessarily occur as a part of the pastoralist’s context. For example,

mustering, or other aspects of the pastoralist's practice will take priority at appropriate times of the year. Such activities will effect the flow and effort designated to a learning project.

***Informal learning episodes, as an individual process, are open to such vagaries as whether they are followed through, whether appropriate information is gathered, and whether adequate decisions are made.***

Learning through informal means is as we have seen, individualistic in nature. We can also suggest that pastoralists tend to perceive their learning through informal processes as something that occurs 'naturally'. That is, something that does not need to be thought about. As such, informal learning is concerned with common-sense actions that may not be adequately reflected upon. Because the learning is 'natural' it does not necessitate it done well, or require that all people do it well, or even similarly. Learning projects, as Tough (1979) pointed out, have to overcome a number of barriers or they may fail. Also, as people's priorities and opportunities to act change, learning episodes may not be completed or they may not be effective.

***Knowledge is seen to be legitimate when it has been experienced or trialed by the pastoralist.***

With pastoralists, perhaps because of their experiences or more isolated ways of working, there is a tendency to see legitimate knowledge as that which has been proven by doing. Perhaps a simple way to look at the connection between accessing information, learning and legitimate knowledge is to paraphrase Jarvis (1999). He suggests that information only becomes knowledge when it is learned, and legitimate knowledge when it is tried and found to work. The pastoralists in the study felt that knowledge (as against information) was only valid when 'they discovered it for themselves'. That is, it is only when they have seen or experienced the knowledge being applied successfully on (or near) their own property that they are convinced of its validity.

In a number of examples pastoralists were engaging in trial and error. The pastoralist in Western Australia who experimented with watermelons is one such example. Over some period of time he planted his crop and then continued to seek information, develop better watering and fertiliser arrangements and generally sought answers to problems as they arose.

Many pastoralists tried some new idea in a controlled and small way on their property and then observed what worked and what did not. In this way they incrementally improved on the situation, whether it was growing watermelons, trying a new pasture rotation approach or entering the tourism market.

***Control over learning generally remains in the hands of the learner.***

In some senses, as informal learning occurs amongst the 'hurley burley' of their lives, pastoralists' control over learning projects seems to be more in the hands of events outside their control. However, while they can be influenced by outside events, the individual is the final arbiter of when they will take on, drop, follow up, or complete a learning project. As the pastoralists' stories demonstrated, such decisions were made by individuals for a

variety of reasons, including their enthusiasm for the learning project concerned. Seeing success, or their ideas moving to fruition, provided stimulus for action.

***Information sources need to be relevant, timely, accessible, personalised and succinct.***

Pastoralists illustrated in a number of ways that it was necessary for information to be presented in a relevant manner. This perception of relevance was based on the personal relationship developed over time with the local extension officer, as well as the perception that either local knowledge had been used to solve local problems, or information had been specifically altered to fit the local situation. There was the perception that the departmental officer was better able to use, and appreciate, the local situation and knowledge.

Information that is delivered by someone who had built up a personal relationship with the pastoralist was much more respected and accepted. Pastoralists also felt more comfortable asking questions of someone if they had developed a personal relationship with that person. This becomes important for areas where staff (such as those working in extension services) change frequently, or where staff are unable to develop one-on-one relationships with local producers.

Time is important to pastoralists, numerous examples illustrated that pastoralists are very busy people who have minimal time to look for, and learn, information. For some pastoralists this may also be related to the importance placed on learning. One area where this is particularly important is computer learning. Frustration also comes in to the amount of time that people are willing to spend learning how to access information, especially if they feel uncomfortable about the way of doing it.

Information should be succinct and useful as pastoralists do not consider they have time to search and utilise information. Information is seen to be most useful when it comes in a readily useable form and is able to be tailored to suit individual situations.

Commercial information sources such as the print media were quite well used in areas where they were readily available. Print media was regarded as a trusted source as it had been around for a long time and, over that period, had provided good information. Many pastoralists demonstrated the ability to sort and filter information from these sources so they could glean what was of import to them. Reliable access to phone and fax information was a major handicap in many areas of northern Australia. This impeded people's access to information and has implications for extension services that may increasingly encourage pastoralists to access them, or their information, through the Internet, fax or phone. Some pastoralists do not feel comfortable with these mediums and prefer more personal contact. This can especially be relevant where the pastoralists are expected to deal with someone they have had no prior contact with, or to discuss a topic with which they are unfamiliar.

Reliable and inexpensive access to information was also a major impediment to greater use of computers and the Internet, including email facilities. Many pastoralists in this study did not have adequate services to enable them to use this technology. The people who did have the facilities to use the Internet considered they did not have the time to learn Internet skills or find relevant pages. Some pastoralists felt incapable or scared of learning

how to use the technology, or regarded the next generation (their children/grandchildren) to be the ones who would really adopt it.

### 3.0 Implications for practice

There are many implications for practice that emerge from the above points. From lack of computer take-up in an increasingly computerised world, to the lack of impact of wide scale advertising. Below are some examples.

***Formulation and legitimisation of knowledge through informal learning processes may challenge our reliance on formal methods of education and learning. There is a dilemma if the primary source of legitimate knowledge can not easily be taught, but has to be tried.***

In other words, it was apparent from the study that pastoralists saw their pastoral operations as highly idiosyncratic and that for information accumulation and learning to be accepted as knowledge required the learning to be validated in their practice. On the other hand, formal learning often removes the person from their practice. Formal courses that place overdue emphasis on conceptual and non-context specific content may not be recognised as useful.

There is a perception, mirrored in the pastoralists' perceptions of education and learning, that to be knowledgeable or 'smart' requires formal education qualifications. This perspective may tend to not only mask the value of informal learning, but also limit the support given to students in formal courses to 'learn-how-to-learn' (described below). It may also mean that unless reflective approaches are used in formal courses, elements of informal learning and practice remain hidden and not able to be improved.

***By remaining 'natural' and 'common-sense' activities, informal learning processes are difficult to improve upon.***

As noted above, it was rare that pastoralists interrogated the processes they used to gather information and to learn. There is, therefore, a case to put forward that if such knowledge remains unspoken or unquestioned, there is the possibility that we may be 'locked into' inappropriate forms of practice, or may not be able to improve the way in which we learn informally (It would not be credible to believe that everyone was similarly proficient at learning informally.). It may also mean that if we cannot question the processes we are using, then when we come to a barrier to our learning (as Tough 1979 indicated) we may not be able to overcome that barrier.

***The general disordered nature of these informal learning processes makes it difficult for educators and others to intervene in the learning process.***

As noted above, there are rarely events which impact simultaneously across the pastoralist industry. Instead individual pastoralists perceive different events or issues as priorities at any one time. Why then would they change priorities based on someone else's priority? It may be that they can be motivated to do so, but as the study suggested this tends to happen on the basis of personalised and high status sources. A more piecemeal and time and resource consuming approach.

***Because the informal learning processes are mostly disordered and elements of learning can be occurring concurrently, agencies or individuals that believe they only need to provide information, and/or use only a simple information delivery system, need to re-examine such an approach.***

As different pastoralists perceive and prioritise problems differently, and learning projects are not undertaken conveniently across the industry, or even a sector of the industry, educators and others need to consider how to reach large groups of pastoralists concerning various issues. For example, the act of providing information on a broad scale through television or radio sources does not necessarily mean that such information will be accepted. For example, is the source of the information credible? Is it personalised? Is it relevant? Is it timely? Has the information been worked through the systems and approaches that pastoralists see to be the most legitimate. This brings into question large scale advertising campaigns. The answers to these questions, in part at least, indicate how effectively information will impact on pastoralists.

***The ‘one size fits all’ courses, or ‘top down’ models of education campaigns would not appear effective in this environment.***

Emerging from the situation above, large-scale media campaigns, if we take the pastoralists from the study as an example, may not be an effective means of providing information to the pastoralist industry. Similarly, ‘top-down’ programs (those devised and decided on by governments or government agencies, for example) may not be effective. As the study indicated, pastoralists are very aware of their local contexts and do not perceive them to be the same as occurring elsewhere. As they need either to see things happening close to them or to use examples from their own practice, why would they perceive a program considered elsewhere to be of immediate interest to them?

## 4.0            **Ways of working: lessons for extension and research**

The report goes on to suggest that there is information that emerges from the research which provides us with directions for the enhancement of pastoralists’ learning practices. We use the term here, ‘ways of working’ to focus on the customs or behaviour of a group of people and the way in which they may feel most comfortable (and which may be most successful) in working together. It is appropriate to keep in mind that many of the approaches described below are already in practice and are well utilised by educators and service agents. It should also be noted that the points made below emerge from the study and are, in many ways, common-sense outcomes from the above observations. That is, while the points made in this paper are somewhat fragmented, they are in effect a part of a whole way of practice.

The points made below were selected as those which could (or do) impact on the ways in which educators and other service providers work with pastoralists.

***Becoming or using an ‘esteemed source’.***

While the phrase ‘esteemed sources’ is somewhat jargonistic, it is meant to cover a broad perspective. The term ‘expert’ has been used in other, similar circumstances, but in a

number of cases in this study pastoralists were referring to the status, not necessarily the expertise, of the source.

The pastoralists in the study tended to network with or seek most of their information and advice from 'esteemed sources'. In other words, they particularly connected with those people who had either become known personally to them or were well known by a wider group of pastoralists, or used highly regarded technical information sources such as specific newspapers, journals, radio programs, and so on. It was apparent throughout the study that pastoralists relied heavily on esteemed sources for their information and advice.

In terms of people, esteemed sources could be applied to a range of people, from family to friends, to extension officers. They were more likely to include extension officers if there had been a relationship over time. Similarly, if they had received 'good' advice from government agencies or service industries, they too could be included in this category. While pastoralists were more likely to accept information and advice (plus test ideas or seek affirmation) from esteemed sources, they also generally believed in the idiosyncratic nature of their property.

If advice and information is more likely to be accepted or trialed by pastoralists if it is coming from an esteemed source, it is important that educators and others work through esteemed sources or become esteemed sources. Such an approach will not only make them more effective, but is likely to provide dividends in terms of increasing their local knowledge and their acceptance in the field.

### ***Establishing contact and developing one-to-one relationships where feasible***

In line with the comments above regarding esteemed sources, pastoralists had a preference to deal with individuals on a one-to-one basis. This was certainly the case with extension officers. They realised that while this was not always possible, it was preferred. Such an approach allowed them to ascertain the 'worth' of the person (and their advice and information) and develop a relationship with them. Through such a process it is also easier to access information as needed information can be brought up during conversation and social interaction.

A one-to-one approach, where for example extension officers were visiting the pastoralists concerned, could lead to better advice on the basis of knowledge of that pastoralist's property and current operations (thus increasing the trust and validity of the person as a source of information). As such, it remains good practice for educators to have knowledge of the pastoralists (and their properties). This is particularly important when we remember that pastoralists believe their properties are different from any others.

Where one-to-one approaches are not possible, it appears important to carry over to other setting those characteristics which make one-to-one relationships an effective learning tool. For example, we can support (or 'build in') one-to-one informal activities within formal group or course settings.

### ***Engaging in practice where possible and thus grounding concepts and ideas in practical exercises on pastoralists' properties.***

As noted above, for the pastoralists in the study knowledge was only valid when ‘they discovered it for themselves’. They needed to see the information ‘work’, experience it for themselves in practice, then it had meaning. This point has a number of ramifications for educators working with pastoralists.

In the first instance, pastoralists would prefer the learning activity to occur on their property. This could take the form of either some trial and error activity or a particular scientific or other trial perhaps supported by government or other agencies. In the second instance, trials seen on nearby properties or on field days were of interest to the pastoralists in the study. In both these cases we are referring to practical on-site demonstrations of a product or new idea.

In terms of formal education there are also lessons to be learnt in terms of focussing the content of courses in practical situations. Asking pastoralists (as students) to carry out activities in relation to their properties appears to be an obvious response to the notion of accumulating legitimate knowledge. Similarly, it would appear useful to provide reflective activities in formal courses to enable pastoralists to reflect on their practice. Action learning and formative evaluation approaches where practice is reflected upon, ideas developed and then trialed (followed by the same cycle) would seem appropriate. Such approaches may also contribute to honing their informal learning skills.

***Using groups to encourage and facilitate informal learning processes as well as to provide credible sources of information and information exchange.***

All of the pastoralists interviewed in this study were actively involved in small producer groups in their region. These groups include Landcare, Bushfire Council, Land Conservation District Committees (LCDC), pest and catchment management groups, as well as shire councils. While informal learning is very individualistic, small groups provide many opportunities for informal and incidental learning to occur. Meeting in informal, small group settings can enable pastoralists to access information and knowledge from other pastoralists, test out ideas, and gain support and encouragement for their own projects (it also assumes elements of support and reflection). The groups also provide a forum to talk about successes, failures, and problems. There is little doubt that group situations, either formal or informal, can potentially provide quite powerful learning opportunities. Educators can utilise group settings in a number of ways. For example, by:

- Using already established groups to make contact with and provide with information.
- Establishing or hosting groups. For example, where educators are running formal courses, they could also establish and network groups of participants which can operate through periods of time when the group is away from workshops.
- Formal courses can be established on the basis of small group principles where elements of networking, support and reflection are built into the program.
- Supporting groups through newsletters, websites and other networking links.

***Highlighting informal learning processes and practices within a range of formal education and other programs.***

It was apparent from the study that pastoralists engaged in formal education courses when they felt that there was a need to gain in-depth information in an area of interest or in an area in which they believed they required more knowledge. For example, tourism and local ecology were examples from the study. In such situations pastoralists were concerned that there was little follow-up after the completion of the course. The information provided under the previous section is useful here. Establishing network groups can both support learning and assist course participants to 'learn how to learn'. Most of the pastoralists returning to study can be termed mature age learners (in regards to formal education settings). As such, they may need to be reacquainted with both the culture and the academic processes of this new setting. Both small informal group settings and the use of relevant practice based examples within course structures would appear appropriate in these circumstances.

***Assisting and supporting pastoralists to access and manage information easily.***

Pastoralists have a plethora of information coming at them in various forms almost continuously. The problem is, much information is provided at a time when it is neither applicable, nor a priority to the pastoralist. In other words the element of timing means that the information is not utilised. As much information is fleeting in nature (radio and television broadcasts for example), relevant information may go unheeded (and thus there is an access problem). Some information sources such as the Internet could be a particularly important and accessible information source. However, if pastoralists in the study are any example, the Internet is not being used anywhere near its potential.

Due to these and allied problems, it therefore becomes important to support pastoralists in developing management information systems. These can vary from:

- files and folios of information:
- locally produced data bases; and
- specific websites.

The development of such management systems could become a part of a wide range of activities such as formal courses, field days, site visits, and the like. It would also be appropriate to include other members of the family (or whole families) in such training and development programs. Those operating formal courses could consider integrating elements of management systems and computer operations into their programs. In these ways educators can enhance the opportunity to fulfil their own role while being supportive of the farming practices of pastoralists.

***Providing information in a relevant, timely, accessible, personalised and succinct way.***

In many ways, providing information in a relevant, timely, accessible, personalised and succinct way, is perhaps the simplest and most difficult suggestion to accommodate. It is simple in that the points made by the pastoralists are sensible and apparent, but difficult as to when that knowledge is 'timely'. However, as a credo to follow when embarking on an information providing exercise, 'relevant, timely, accessible, personalised and succinct', is a reasonable checklist to follow.

## 5.0 Conclusion

This paper has set out to provide a synopsis of the Tropical Savannas Cooperative Research Centre's research project concerning the learning processes of pastoralists. While practitioners would recognise many of the practices and processes outlined in this report, they often remain too obvious to be cross-examined when necessary. Above, we have provided some brief discussion on a number of the points made by pastoralists in this study, particularly as they affect those of us engaged in education or service industries. We have also given some examples of the implications for practice that emerge from the study's findings. Undoubtedly, you will be able to add more. Similarly, our suggestions for future directions, as they emerged from the study, could be added to.

We hope that the information provided in this paper leads to further discussion of learning, and how educators and others may better support such learning.

## 6.0 References

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