



Understanding Social Learning Processes in a Citrus Farming Community of Practice

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Abstract

This paper focuses on what would traditionally be termed 'non-formal' learning processes in the context of a case study examining how citrus farming communities in the Patensie Valley in the Eastern Cape in South Africa were learning conservation practices. Communities of Practice theory was used to provide a conceptual framework for researching these learning interactions. Through historical and other qualitative research methods, I was able to establish that farmers in this community of practice learned mainly through responding to change and uncertainty, through forming and drawing on networks and community structures, through intergenerational learning, and through various interactions with each other. The historical research also pointed to the significance of policy and market-based changes in farmer learning, and their attachment to the land, which is shaped through historical associations with the land, and through embedded relations in farming practice cultures. The paper provides an example of how Communities of Practice theory, complemented by historical research, can be used to understand non-formal learning.

Introduction

Researching and research design can be an extremely challenging process, deciding what methods to use, which literature to review, what orientation the research is going to take and how the data should be analysed. As a researcher with a background in the natural sciences I was very familiar with undertaking quantitative research and believed that education was a process of teaching someone something new in a formal way. As I began to transition from the natural sciences to the social sciences it became clear that learning was a far more social process than just being taught something by a more experienced individual. Learning does not stop once people leave formal education environments, people continue to learn over the course of their lifetime and people learn most of what they know outside of school and formal learning environments (Wals & Heymann, 2004; Rickinson, 2006). Learning is a human process; it does not begin and end of a specified time (Wenger, 1998). There are often situations in which people have gained knowledge and understanding from experiences outside of school where simple conversations and storytelling with friends and family members has provided insight and learning opportunities (Elliott, 1999; Smith, 1999; Field, 2003).

Earlier research undertaken with Conservancies revealed that groups of landowners form voluntary partnerships around a common future focus, mainly conservation of biological diversity and sustainable land use (Downsborough, 2005). Through various interactions such as

meetings and forums these landowners formed powerful groups for the communication and sharing of information. I thus became interested in the less formal ways in which adult farmers learn about conservation practices. It was this interest that led to the investigation of the ways in which farmers learn conservation practices and how this learning informs action, which is the focus of the study that I report on here (Downsborough, 2007). The study that I report on here took place in a citrus farming community in the small town of Patensie in the Eastern Cape, which forms part of the Cape Action for People and Environment programme as it is situated alongside the Baviaanskloof Megareserve.

As researcher, I was particularly interested in finding out how farmers came to know what they know about conservation practices in farming and how they learn about conservation. In terms of the research design I began to grapple with the ways in which the learning processes taking place in this farming community could be investigated and analysed. A reading of the literature led to Lave and Wenger's (1991) notion of Legitimate Peripheral Participation as a means to understanding learning processes. Further reading into Wenger's work uncovered the notion of Community of Practice which refers to 'a group or groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly' (Wenger, 2000). One of the key elements within a Community of Practice (COP) is the idea of a shared practice.

Benzie, Mavers, Someekh and Cisneros-Cohernour (2005) claim that Wenger's notion of a Community of Practice provides a useful theoretical framework for researching the social processes of groups in contexts such as the workplace or a local community:

The strength of working with an analytical framework that has the concept of Community of Practice at the centre, is that it emphasises the situated nature of knowledge and brings matters of context to the fore. It highlights the relationships both between individuals and between individual and community. In this way, it is well situated to supporting accounts that capture social complexity. (Benzie, *et al.*, 2005:185)

By using Community of Practice as a guiding perspective and analytical framework in this study, I was able to gain insights into the learning and learning processes that were taking place (with) in the citrus community.

Research Process

Data was generated through three main methods; a) 17 semi-structured interviews with farmers and key informants in the area, b) document analysis (minutes of farmers meetings and historical documents) and c) personal observations both of the area through photographs and the farmers' meetings attended. A contextual profile provided a useful means of gathering historical information pertaining to farming, settlement, history of citrus export and past events that have shaped the community into what they are today. The contextual profiling assisted in gaining a deeper understanding of what constituted the Patensie citrus farming community as it was of critical importance to the research to determine if the citrus farmers were indeed a

Community of Practice and not just a community of interest. Semi-structured interviews were used as a means to gather information on how farmers came to be established in the area, how they knew about farming, what conservation practices they undertake and what some of the challenges they face were.

Findings

Data analysis took a two-phase approach. The first phase analysed the data generated through the historical research process and the contextual profile. The key findings from this phase included:

- There have been key economic, political and environmental events that have shaped the Patensie citrus farming community (e.g. introduction of new environmental regulations in international trade agreements gave rise to a range of new conservation practices in the area);
- There is a strong family presence and history in the area;
- There is a strong commitment to the land and the family farm;
- Farmers undertake a number of activities to reduce the impact on the natural environment;
- Partnerships, private companies and consultants are important role players that farmers most commonly interact with;
- Farmers struggle with the changing global economy and the export of their citrus internationally, especially with the introduction of export standards and fluctuations in the market price; and
- There is an emerging partnership with a conservation agent in the area (Baviaanskloof Megareserve).

The second phase of the data analysis applied a Community of Practice perspective as an analytical framework for explaining some of the relationships and learning (learning processes) that take place within (and between) a community. These results are discussed in more detail below.

Identifying the community of practice

A Community of Practice is formed by people who engage in a process of collective or collaborative learning. According to Wenger (1998) Communities of Practice are everywhere and we are members of many of them, at work, at school or in recreational settings. He notes examples such as: a tribe learning to survive, a band of artists, a group of engineers working on a similar problem or a network of surgeons exploring techniques. Communities of Practice are therefore organised around what matters to the members of that community. Wenger (1998) cautions, however, about calling every social configuration a COP as it would render the concept meaningless – but on the other hand, a definition that is too restrictive would also make it useless.

In this research it was important to note how the shared history and concern of the citrus farmers held the group together around the engagement of the risks and concerns, such as the

deregulation of the export market or changing legislation – including environmental trade agreements instituted by the European Union (EU) governing exports. This shared concern was thus key to the learning interactions and knowledge generation in the community. There are three elements that really define a COP; the domain, the community and the practice.

Applied to the Patensie citrus farmers, the shared domain or interest of this community was (and still is) the long-term production and export of citrus products. This is a practice-centred identity that brings the members of the community together and encourages them to interact with each other. Through formal and informal meetings, conversations and interactions, farmers in the area have built relationships with other farmers, which over time have come to be constituted as a community. There is an evident history of working together on the practice of producing and exporting citrus products (e.g. sharing innovations; establishing cooperatives) that has resulted in the formation of collaborative relationships and partnerships. Through their interactions and relationships, the citrus farmers have developed into a knowledge community, whereby the knowledge of farming lies with them as a resource (shared repertoire), which they are able to communicate and share with other people.

Learning in the Patensie orange farmer Community of Practice

Owing to their their history of engagement, their collective responses to change and uncertainty and their ability to share knowledge and work with one another in their practice, it was clear that the Patensie Orange Farmers were a COP. After establishing this, I then sought to understand in more depth how it is that farmers know what they know? And how do they learn? Through analysis of the data, I was able to identify four dynamics of the Patensie citrus farmers learning, each of which is discussed in more detail below:

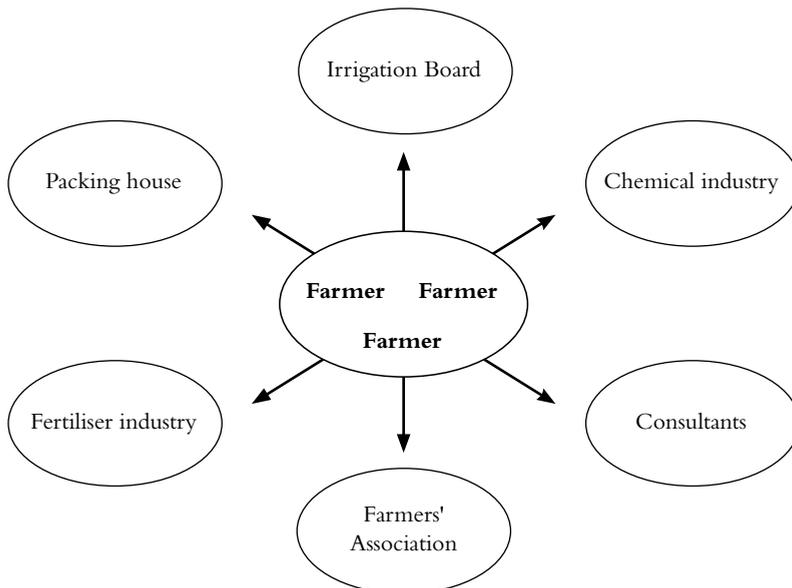
Farmers learn in the family through family ties and through inter-generational knowledge-sharing over time: The contextual profiling and historical research indicated that there is a definite history of farming in the area that dates back almost a hundred years, with farms that have been passed down through the generations. One farmer noted, for example, ‘farming isn’t just something you come into, it is quite a family orientated practice, you are generally born into a farming family and grow up with the ideas of becoming a farmer to take over the family farm.’ Many of the farmers reflected that they had learned about farming from their fathers and grandfathers, as shown in this statement: ‘My knowledge came from my dad and from working with the land since we were children.’ This knowledge that circulates in the citrus farming community in Patensie could be considered as a form of local or inter-generational knowledge that is handed down through the generations. From a Community of Practice perspective, Wenger (1998) notes this knowledge could be seen as a shared repertoire or resource that has been generated within the community and is shared amongst or between members of the community. Legitimate Peripheral Participation (LPP) as described by Lave and Wenger (1991) proves useful in examining the process of sons participating in their fathers’ practices to learn more about the practice.

Farmers learn through their interactions with other farmers: The citrus farming community is a close-knit community in which most farmers know each other and interact on a fairly regular basis,

either through farmers' meetings or conversation in supermarket. From the data it was evident that farmers learn from each other through their interactions and relationships with each other, with these interactions centered on issues of common interest (such as exporting citrus, or dealing with new environmental regulations). Often when farmers are faced with problems and uncertainties they get together, informally or formally and collectively discuss these issues. The sharing of knowledge, experiences and ideas are key aspects within the Community of Practice. When farmers were asked how they dealt with problems and who they would ask for help many farmers responded that they would first ask a colleague, as shown in this statement 'We in the Gamtoos is [are] like a big family, the one helps the other one and you will never be given a cold shoulder when you go to somebody to ask them for help.' What was interesting to note in the data was that farmers tended to rely on each other for technical farming information, which indicates a confidence and familiarity with this information amongst the farming community of practice. In contrast, the majority of their conservation information in particular came from consultants, agricultural extension officers and from private companies such as fertiliser companies, indicating perhaps that this was a new area of knowledge for farmers in the Patensie area, which they are less familiar with.

Networks and partnerships create the space for learning to occur through purposeful and sustained interactions: Lave and Wenger suggest that learning happens through the interactions and relationships people form over time. Field (2003) notes that people make connections with people whom they share an interest, and by making and maintaining these connections over time, people are able to work together to achieve things. Figure 1 maps some of the main people/organisations the Patensie Citrus famers were interacting with at the time of the research.

Figure 1. Networked interactions of the Patensie citrus farmers



The data showed that farmers in the Patensie Valley have developed partnerships with a number of institutions and organisations over the years. The Farmers' Association, for example, was established close to one hundred years ago and so interactions with this association have an extensive history, whereas partnerships and interactions with private consultants have emerged in the past five years. One of the driving forces behind the recent use of consultants has been in response to the volatile export market, changing regulations and the introduction of international export standards to which all farmers are expected to comply. These are also factors that have led to a degree of uncertainty amongst many of the farmers. This brings another dimension to the Community of Practice, whilst farmers have the skills and knowledge to deal with some complexities, they have chosen to interact with specialists and consultants in areas of uncertainty, thus creating a process of learning from external individuals in new knowledge areas.

Change and uncertainty have been driving forces for learning to take place: Quite a unique finding in this study was that when farmers have been faced with challenges such as changes in marketing strategies and the implementation of new norms and standards (e.g. international environmental standards), they have come together as a community. It is therefore the process of change or uncertainty, or the threat of these, which has brought the farmers together to engage in collective, collaborative and purposeful discussions. Wals and Heymann (2004) note that often when people are faced with challenges, conflicts and uncertainty, they tend to get together in an attempt to respond to and adapt to these circumstances. There was evidence in the data that farmers started meeting around issues that concerned them over 100 years ago with the formation of the Farmers' Association. Since this time, farmers meetings have played a central role in being the provider of information and also a place where people come together to collectively discuss problems. It is from these early meetings that the COP emerged. In other words the COP resulted from the farmers' responses to changes and uncertainties in the area and industry. As external changes were taking place to the markets for example, so the community (of practice) were responding to and adapting to these changing situations. It was also noticeable that the Baviaanskloof Megareserve were using the Farmers' Association as their 'entry point' for discussing new conservation practices with farmers, indicating the usefulness of such structures for encounters with new knowledge.

Learning in other Communities of Practice

Whilst this study has revealed some insights into the ways in which the Patensie citrus farmers have come together, interacted and learned from one another through knowledge sharing, this is not a unique situation. In work undertaken with dairy farmers in Australia O'Kane, Paine and King (2008) noted very similar findings to those presented above. The authors also used a COP approach as a means to better understand the complexity of social processes and the relationships that exist between farmers and extension professionals. Some of their findings include:

- Farmers have developed good working relationships with a range of industry professionals such as seed companies, stock agents and agronomists.

- The members of the farmer group COP have shared expertise and passion for the enterprise of dairy farming and are engaged in expanding and refining that expertise. They are mutually engaged in the action of farming and maintain regular and intensive conversations with each other in their attempts to hone their expertise and produce the best results from the resources available to them.
- The core of the COP consists of farmers who bring the wealth of their locally contextualised knowledge to bear on discussions concerning the farm system.
- Farmers attending local meetings pay more attention to advice born of experience from successful farmers than they do to key scientists.
- The core members of the COP became the principle decision-makers while the peripheral members (industry) provided the group with boundary information by their connectivity with other groups (O’Kane, *et al.*, 2008).

In a study on environmental learning in Communities of Practice involving rural farmers in Zimbabwe, Pesanayi (2008) also found that inter-generational knowledge sharing, farmer-to-farmer interactions were significant non-formal learning interactions. His study also found that risk and uncertainty (in his case risks associated with drought) was a key motivating factor for farmers to engage with each other and other boundary agents in order to learn how to respond. An interesting finding from the Pesanayi (2008) study, which was not as apparent in the Patensie case, was that boundary agents often created further uncertainty in communities of practice, as different boundary agents bring different messages, which lead to ambivalence. If considered in the light of the nature of the risks and uncertainties experienced by the Patensie farmers (trade-related and regulation-related), it is possible to see that different farming communities may experience different risks and uncertainties, which require different learning-centred interactions and responses.

Benefits of Working with a COP Framework

My study, together with the two other studies cited above, have all concluded that using a COP framework provides a good starting point for unpacking and understanding socially complex systems. In the case of the study with the Patensie farmers (Downsborough, 2007), a COP analytical framework allowed me to understand and make sense of some of the learning that was taking place firstly between farmers and then between farmers and the wider community. A COP framework also allows one to understand a context, in this research citrus farming, from the point of view of the people in it. In summary a COP framework is useful to social research as:

- it provides a context in which one can examine and understand learning;
- it is an effective way to describe and explain some of the social learning processes taking place in community; and
- it highlights the roles and relationships between individuals and individuals and the community.

There are also limitations to working with a COP framework. For example, the COP framework does not adequately theorise power relations, nor does it adequately theorise the role of language in learning. It can also lead to problems of conservatism, due to its reliance on contextual/situated learning analysis, which discounts wider knowledge and structural influences (Lotz-Sisitka, 2008). In this study I found that it was important to complement the COP analysis with a sound historical and wider contextual analysis, so that I could, for example, develop a better understanding of the power relations between conservation organizations and farmers, and the power relations that are invested in international trade regulations (Downsborough, 2007).

Conclusion

In this paper I have shown how a Community of Practice framework has been used as a means to engage with and analyse data generated through the research process with citrus farmers. The COP framework specifically highlighted key interactions and relationships within and between the community and provided insights into some of the sociological ways in which farmers learn. The paper has also shown that this theoretical framework is being used more widely in analyses of non-formal learning. The study has shown too, that while it is possible to identify key dynamics of learning drawing on COP, it does not easily provide a means to investigate historically induced power relations, or structural tensions and contradictions that exist in COPs, and such understandings need to be developed through complementing the COP analysis with in-depth historical and contextual profiling data.

Notes on the Contributor

This paper summarises and reflects on Linda Downsborough's research with citrus farmers undertaken as part of her Masters' degree at Rhodes University. In her current position, as a researcher in the Water Research Node at Monash South Africa, she continues to work on the ideas of networking, collaboration and social learning. E-mail: linda.downsborough@adm.monash.edu

Note

This paper is based on some of the findings in my Master's thesis (dissertation of limited scope) entitled 'Social Learning Processes in a Citrus Farming Community of Practice' (Downsborough, 2007). I would like to acknowledge the contributions of my supervisor, Professor Rob O'Donoghue, for his guidance in conducting the research.

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