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Turning to Case Studies as a Mechanism for Learning and Evaluation in Action Learning

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Abstract

Case studies are a useful means of capturing and sharing experiential knowledge by allowing researchers to explore the social, organisational and political contexts of a specific case. Although accounts of action learning are often reported using a case study approach, it is not common to see individual case studies being used as a learning practice *within* action learning sets. Drawing network action learning project this paper explores how the process of coaching, articulating, authoring, sharing and editing case studies provided a vehicle for learning and research within the network action learning sets. The intended contribution of this paper to the theory of action learning is to extend the range of learning practices to include the case study within the network action learning set. It discusses how case studies act as boundary objects, which are artefacts which can be used to cross boundaries between groups in order to facilitate learning that might not otherwise occur.

Keywords

Network action learning, case studies, network learning coach

Introduction

Action learning is a way of thinking and working that exploits the learning that can be gained from focusing on real life problems of personal consequence to learners. Action learning occurs in an environment where engaging in experimenting, questioning and reflection (*Q*) is privileged over 'expert' dissemination of programmed knowledge (*P*). Action learners learn though taking action and reflecting with peers on the action, with the aim of improving their own practice. In the process

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individuals can experience transformation in personal perspectives, in social relations and in perspectives on managing (Rigg and Trehan, 2004).

Although accounts of action learning are often reported using a case study approach it is not common to see individual case studies being used as a learning practice *within* action learning sets (Pedler and Abbott 2013). This is perhaps not surprising. Although case studies are a useful means of capturing and sharing experiential knowledge by allowing researchers to explore the social, organisational and political contexts of a specific case, entity or phenomenon (Stake 2005), the learner is not personally involved in the case.

There are two fundamental types of case study: research cases and teaching cases. The research case and the associated methodology is a way of addressing a particular kind of research question (Voss, 2009). The teaching case is a mechanism for teaching and learning in an applied domain (Leenders and Erskine, 1989). There are commonalities between the two: both relate to practice and both present a history of practice. However, there are differences: the research case is subject to quality standards which enable the research insights to be acknowledged as contributions to theory while the teaching case is subject to teaching quality standards which enable the discussion and reflection upon the story of the case to be acknowledged as contributions to learning. So, although research case studies privilege real life problems over abstract theory, insights generated are codified and abstract in nature and not necessarily meaningful to practitioners in a pragmatic sense. In contrast, teaching case studies focus on the practical over the abstract and thus, insights generated in these practice environments are more pragmatically meaningful.

Using case studies to report on research studies or to engage learners, their use generally entails discussion rather than action. For action learners, the distinction between taking action and talking about taking action is an important one (Revans, 1980). Action learning is focused on the learning and development that can be achieved when professionals engage in cycles of reflecting and acting on their own real-life problems in real time. Reflection occurs in the company of peers in an action learning set, which leads to taking action on the problems outside the set and a subsequent return to the set to discuss and reflect on their actions. How then can case studies sit comfortably with an action learning approach?

Research case studies used in the traditional way, to present a theoretical insight based on someone else's real life example may fit within a philosophy of action learning as programmed knowledge (P) (Revans 1991). Similarly, teaching case studies used in a traditional teaching and learning context, present a concrete story based on someone else's real life example, as a form of P for discussion and reflection. Yet, we want to argue there is potential to use the teaching case study

in a non-traditional way, easily reconciled with a philosophy of action learning (Revans 1991). In this paper, we aim to demonstrate how the creation of teaching case studies can be used to extend the range of learning practices within an action learning set and have the potential to extend both learning and action beyond the set. We define case study here as a combination of the rich description of a case writer's real life example, and a discussion note reflecting on that account. Further, we define case study use to encompass *both* the writing of the case and its employment within a traditional teaching and learning context. Our contribution through this paper is threefold: firstly, to illustrate how the process of case writing creates opportunity for questioning and reflection within an action learning set; secondly to advance the concept of case study as boundary object, with a key role in advancing network learning, and thirdly to illustrate the potential of case study writing as part of an action learning process for evaluation of that action learning.

Context: An Inter-organisational network

The discussion is framed within the context of a pan-European project which was conceived with the aim of improving the organisational and innovative practices of SMEs and thus supporting their sustainability. Action learning is being used to facilitate collaboration and learning within the project and to facilitate the development of a network made up of SMEs, industry suppliers, research institutions, third level education providers, industry representatives and other stakeholders. Physically the network connects nine national centres across Europe and joining it gave members access to activities and events such as workshops, conferences and technology transfer events. Key actors at each centre or network node are network learning coaches (NLCs), whose. role is to facilitate and enable knowledge and technology transfer both within their national centre and between other national centres through interactions among SMEs. The authors acted as both coordinators of the action learning strategy across the project and as action learning coaches for the NLCs. Action learning underpins a range of project activities and acts as both a coordinating and learning mechanism across the project (Shani and Docherty, 2008).

As the project has progressed and SMEs have joined the network and attended events, data is being collected on individual project events and activities, but as project partners we have grappled with the issue of how to evaluate the cumulative impact of activities/events on individual SMEs and to find ways to share the learning occurring both within the project network and within action learning sets. Our approach to finding one solution to these issues, namely developing a suite of case studies, forms the focus of this paper. Since our focus is on highlighting how case studies can sit comfortably with an action learning approach, in the remainder of the paper we first describe how action learning is enacted within the project, we then present the issue of evaluation as an action learning problem

and the opportunity for cases studies to contribute a solution, and finally we highlight how case studies can also span boundaries to facilitate information sharing within and outside the project.

Enacting Principles of Action Learning within the project

Revan's formula $L = P+Q$ is often used to describe the process of learning (L) that occurs in action learning, where P stands for programmed knowledge which is the type of knowledge that exists in books or known to experts and can be gained from formal instruction and Q stands for questioning insight which is the insight gained by asking fresh questions about a problem and reflecting on the responses. Vince (2004) argues that learning does not just occur though an individual's own experience but also through engaging with and collectively reflecting on organizational relations and dynamics. He argues that if organisational learning is an aim of action learning, then *organising insight* (O) must be added to the formula since organisational dynamics can impact on action learning and the reverse is also true. Coughlan and Coghlan (2011) extend the formula yet further to take inter-organisational settings, such as the one explored in this paper, into account. The resulting formula is $NAL = P+Q+O+IO$, where NAL action learning by the network, and IO is insight in an inter-organisational context. This formula takes into account the fact that individuals in a network learn both at *home,* in their own organisational environment, and *away,* in the network and that learning in each environment can be explored and developed further in the other (Holmqvist, 2003). In this project, there are a range of issues at micro and macro level. At a micro level they might entail dealing with organisational challenges such as the technological or business needs of an SME while at macro level there are inter-organisational issues pertaining to the stability, functionality and sustainability of the network. Accordingly, both O and IO are key elements of the action learning principles that underpin the project.

The project structure can be viewed as comprising of a number of interconnecting subsystems. The project governance structure incorporates individuals in various coordination roles as well as a steering committee. There is a project network made up of SMEs, researchers, equipment and service providers, educators and other stakeholders. At each of the national centres, there is at least one network learning coach (NLC) who is both a project partner and a staff member of a research or third level educational institution. These NCLs are key individuals who cross boundaries between different subsystems and in doing so, link them (Coghlan, Rashford and Neiva de Figueiredo, 2016). The boundary spanning activities with which NCLs engage can be divided into three main categories: representation, co-ordination of task performance and general information searching (Marrone, 2010). In undertaking representation, boundary spanners advocate for the group by negotiating for

support for group decisions and looking for feedback on team activities. Co-ordination of task performance involves interaction with others in order to achieve team goals. General information searches are those which involve seeking knowledge and expertise from outside the group. The role of the NLCs includes all of these activities. They act as the point of contact for SMEs in their region who wish to engage with the project and join the network. They liaise on a one-to-one basis with these SMEs to explore how their needs can be met by the project. They are also responsible for organising and finding expertise for project events and activities. They identify productive partnerships and initiate relationships across the network between individual SMEs and also between SMEs and other network members such as technology suppliers and researchers. They also maintain relationships with each other and interact with the project governance structures to ensure that the network functions as an integrated network rather than as nine individual national centres.

The NLCs make up an action learning set themselves, meeting physically and virtually at regular intervals to share concerns, experiences and reflections. Our role (the authors) is as action learning advisers or facilitators for the set to assist set members to learn with and from each other, to facilitate their boundary spanning activities and support the enactment of $NAL=P + Q + O + IO$.

Although there are a number of variations of action learning in current use, there are four classical principles underpinning action learning derived from Revan's writings identified by Brook et al (2013 p.729) as:

- A requirement for action as the basis for learning
- The search for fresh questions and Q (questioning insight) takes primacy over access to expert knowledge or P.
- Working with problems (no right answers) not puzzles (susceptible to expert knowledge); and
- Action learners working in sets of peers…to support and challenge each other.

These principles are being enacted in NLC set meetings which enable members to explore, challenge, critically analyse and find potential solutions to the issues they encounter at their hubs. Questioning is a key element of set meetings as well as an expectation that action will be taken by set members between meetings.

A shared network problem: Evaluation

Revans (1982) distinguished between puzzles and problems and suggested that problems should be the focus of action learning. Puzzles are issues that can be clearly defined and dissected and to which

a right or wrong solution can be found. Problems on the other hand are those intractable and messy issues that are complex and dynamic, have no one solution, may not be clearly defined and are often closely connected to other issues in ways that are difficult to identify. Since Revan's time, action learning has been used to address both problems and puzzles, but holds particular learning and organisational benefits for those focusing on problems (Edmonstone, 2015).

NLCs encounter both puzzles and problems, related to SME issues, issues with their own role and issues related to the development of the network. It has been our experience that although puzzles may be brought to set meetings by network learning coaches, these are quickly solved and it is with addressing problems that the set occupies itself. A shared concern within the project from the outset was how project progress and outcomes might be evaluated and the NLC action learning set took this up.

On first glance the issue of evaluation in the project may not seem like a complex one. After all, the field of evaluation is a well-developed one, and indeed, we drew from this field by using Kirkpatrick and Kirkpatrick's (1998) evaluation model to provide a framework for evaluation in the project. However, on closer inspection, evaluation become a knottier problem, not only because of the complexities of the project, but also because of the complexities involved in evaluation.

With regard to the complexity of the project, there are a range of developmental events and activities occurring on an ongoing basis across all nine national centres. These include training workshops, networking events and information days. SMEs have the choice of engaging with as many or as few of these activities as they wish. As well as evaluating single events, project partners must evaluate the cumulative impact of participation in the project on individuals and firms who have engaged with project activities to lesser or greater degrees. Thus, evaluation must focus not only on individual development, but also organisational and inter-organisational development. This brings with it the challenge of making sense of the interactions between individual and organisational learning which are inextricably intertwined (Rigg 2008) and the added challenge of making sense of those relationships in the context of a network.

Kirkpatrick and Kirkpatrick (1998) highlight the importance of evaluation at four levels:

1. Participant reactions
2. Learning
3. Behavioural change
4. Organisational results

There are difficulties with evaluation as detailed by Edmonstone (2015). When to evaluate can be a nuanced decision. It can be difficult to time the evaluation of leaning that is intended to have long term rather than short term impacts and the risk with collecting data too far after an event is that participants' recollections become less dependable. It can also be difficult to define what success actually means, due to different individual expectations. Additionally, evaluation can be a costly and political process and it can be a struggle to match the size and complexity of evaluative mechanisms to a project.

It is relatively uncomplicated to assess individual participant reactions to a particular event or activity and it is also possible to assess learning. However, assessing the application of that learning is more difficult. There are interrelated characteristics related to the participant, characteristics related to the design of the event and characteristics related to the SME that impact learning and the application of learning in practice (Mavin et al., 2010). How can we know if sales increases or product innovation are directly the consequence of the SME owner attending a particular event, rather than being the result of a constellation of factors? Therefore, in moving up the levels of evaluation from participant reaction to organisational results, it becomes increasingly difficult to assign cause and effect (Kirkpatrick and Kirkpatrick 1998). Provan and Sydow (2008) draw the conclusion from an examination of the limited research on the topic, that evaluation at inter-organisational level should be closely linked to evaluation of individuals and organisations involved. Indeed, it could be argued that in the case of a network, evaluation of one must necessarily involve evaluation of the others. Thus, as highlighted in Figure 1, we add a fifth level, inter-organisational results, to Kirkpatrick and Kirkpatrick's evaluation (1998) model.

Level 5: Inter-organisational results

Level 4: Organisational results

Level 3: Behavioural change

Level 2: Learning

Level 1: Participant reactions

Figure 1: Levels of learning

Evaluating inter-organisational learning and outcomes poses additional challenges. Establishing causal links in an inter-organisational context is even more complex than establishing them at individual and organisational level. As highlighted by Provan and Sydow (2008) it can be difficult to attribute

outcomes to involvement in a network and to distinguish them from outcomes that may have occurred anyway. Complexity is also increased by the existence of various factors that can influence interactions between individuals from different backgrounds such as trust and power (O'Leary, 2016). These can impact on network processes and outcomes and may also affect decisions on who should be involved in evaluation. Provan and Sydow (2008) suggest that collaborative evaluation involving a range of stakeholder from the network is helpful in evaluation at an inter-organisational level. Within this project, action learning provided the vehicle through which such collaborative evaluation could occur.

The Intervention: Case Study Development using an Action Learning Approach

The NLCs have collaborated in the development of over 20 case studies. As a set, the case studies hold significant potential for the development of each NLC's knowledge of improvement opportunities in the firms and their role in facilitating the realisation of those opportunities. The unit of analysis is the firm, the voice is that of the participant in the project. Each case is a rich description of the practice and context within which the firm operates and tells the particular story of the firm. Each case is built on data, based upon the experience of the firm as told by the firm through one or more interviews. The firm-level data include the particular background, history, challenges and engagement in the project. For example, the challenges range from maintaining regional identity in a nationally competitive context to codifying operational practices in order to maintain certification to produce. As a set, the case studies are comparable in that multi-dimensional and comprehensive insights emerge in relation to the challenges faced by the firms and firm-level impact of their participation in the project.

Revans' (1971) praxeology of three interacting systems of *alpha*, *beta* and *gamma* underpin NLC set meetings. *System alpha* is focused on the investigation of a problem, taking contextual elements into account such as the managerial value system, internal resources and the external environment. *System beta* is concerned with addressing the problems in successive cycles of planning, taking action, reflecting on action and learning. *System gamma* emphasises the personal learning gained through interaction with systems *alpha and beta*.

In system *alpha*, reflection, critical questioning and discussions both within the NLC action learning set and outside it, led to the identification of evaluation as an issue. NLCs were already gathering data directly on participant reactions and participant learning during project events. However, behavioural changes, organisational learning and inter-organisational learning were not

being captured. Set members adopted the development of case studies, as a potential solution to the problem.

System beta involved an intervention in six parts:

1. development of case-writing guidelines by the set advisers after a set discussion
2. briefing of the network learning coaches (as a learning set) followed by discussion and critical evaluation within set meetings to clarify the use of the guidelines
3. Cycles of case writing by the network learning coaches. NLCs engaged with SMEs in an action learning way by meeting them *at home* in the national centre to engage in mutual questioning and critical reflection to explore what the firm was trying to achieve, how they had engaged with the project, what leaning had occurred and what impact this had at a personal level, organisational level and inter-organisational level. The case studies were then introduced *away* in action learning set meetings where a further process of critical reflection, facilitated by the set advisers, led to editing and refining. This initiated further cycles of reflection *at home* where the SMEs and NCLs examined the refinements and developed the case further.
4. presentation by the network learning coaches of their cases at a project meeting as a basis for discussion among project partners on the performance of the project against its objectives
5. Sharing the cases with other project partners
6. planned use of the cases by the network learning coaches in forthcoming workshops and technology transfer events and planned dissemination of the cases on the project website

In the design and implementation of complex research projects consideration of structure is important. In this regard it is useful to make a distinction between structuring and directing as discrete and interdependent interventions (Coghlan, Coughlan, and Brennan, 2004; Coughlan and Coghlan, 2011). 'Structuring' as an intervention refers to what programme designers and facilitators do with regard to structure (along a continuum from high to medium to low structure), while 'directing' reflects how the designers and facilitators use structure (along a continuum of imposing it in a directive manner to a non-directive manner in which participants adopt their own programme and process). For example, a high, medium or low structure may be imposed (high directiveness) or offered for a group to accept or not (nondirectiveness). Structuring-nonstructuring and directiveness-non-directiveness may be plotted in relation to one another, as in Figure 2.
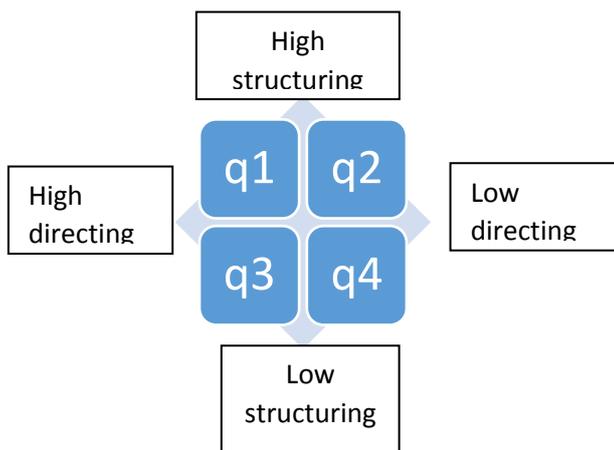
Figure 2. Structuring and Directing

Through action learning, each set member can address personal problems individually or they can chose to address a mutual problem as a group. The former approach is an example of non-directiveness. The latter approach means dealing with a mutual problem that must be addressed in a cohesive way and as such, may be more directive and more structured (q1). In this project case writing was proposed as a structuring intervention. It was a mechanism by which the experience of the firms within the hubs could be articulated in terms of the firms' experience within their respective industry and local market (system alpha), their engagement in the project network with the programmed events and with the NLCs and other like firms (*system beta*) and their own learning (*system gamma*). The guidelines followed a medium structuring in that they offered guidance on how a case could be selected, how data could be gathered and how the case could be written and used, but did not impose a tightly defined process or final case structure. The NLCs could choose to participate or not, thus the approach was one of medium structure-nondirective one (q2). All NLCs chose to develop between one and four cases. That they responded enthusiastically and supported one another over the period of the case-writing and at set meetings, demonstrated the perceived potential of the cases as capturing the core of the action learning process for them in their role as network learning coaches.

System gamma was enacted in case writing and discussion for SMEs through their engagement with NLCs which led to critically questioning their practice and was enacted for NLCs through the process of engaging with SMEs, writing the cases and critically questioning not only their own case but those written by the other NLCs. Accordingly, in contrast to their traditional use, the case studies did not function as static objects to be used outside their context. Instead the *process* of

developing case studies was used as a stimulus to NLCs and SMEs to question and reflect upon their practices with a view to learning and applying that learning. Additionally, by using action learning in evaluation, space and time was created within the NLC set to explore and critically assess project aims and to evaluate whether and how we were meeting them and which were the more appropriate aims to focus on. All of this activity led to learning and subsequent action at personal, organisational and inter-organisational levels. Table 1 summarises this in terms of the formula *NAL=P+Q+O+IO*.

Perspective	Phase		
	Cycles of Case writing	**Case Usage**	
		In Evaluating Project Processes and Outcomes	**Used in Project Workshops and Events (If applicable[1])**
SME – subject of the case	• P: little overt theory • Q: the questioning and reflection on the practice and experience of the firm • O: questioning and reflecting to make sense of the organisational dynamics within their firm that constrained or aided their attempts at change • IO: insight on their interactions with the project network • L: the insights which emerge from engaging in the telling of the story to the case writer	N/A	• P: the case itself • Q: the questioning and reflection on the practice and experience of the firm led by the discussion facilitator and the other food producers • O: articulating the organisational dynamics within their firm that constrained or aided their attempts at change • IO: insight on their interactions with other food producers at the events • L: the insights which emerge from engaging in the telling of and reflection on the story to other firms
Network Learning Coach – writer of the case	• P: a sense of what theory might be useful in the discussion guide • Q: the questioning and reflection on the	• P: a sense of what theory might be useful in future project activities and events	• P: application of theory to help with the positioning of the experience of the firm

[1] Thus far one SME has presented her case at a project event. It is envisioned that others will do the same.

practice and experience of the firm • O: gaining a deeper understanding of the organisational relations at the firm • IO: gaining greater insight on activities across all national centres in the network • L: the insights which emerge from engaging in gathering the data and writing the story of the firm	• Q: the questioning and reflection on the practice and experiences at each of the national centres • O: gaining a deeper understanding of the organisational relations and dynamics at their national centre • IO: questioning and reflecting on interactions with other NLCs and project stakeholders and the impact on the project progress • L: the insights which emerge from evaluating project progress	• Q: the questioning and reflection on the practice and experience of the firm led by the discussion facilitator and the other food producers • O: gaining a deeper understanding of the organisational relations and dynamics at their national centre • IO: questioning and reflecting on the project network and interactions with other NLCs and project stakeholders • L: the insights which emerge from engaging in the questioning and reflecting on the story with other firms

Table 1: Enactment of Action Learning in the Process of Case Development

Case Studies as Boundary Objects -P to Extend Learning beyond the Set

Argyris highlights that organisational learning is promoted through the sharing of valid information, which is information relating to an issue that is relevant and meaningful to others (Dixon 2014). This idea is echoed and extended in the open innovation literature, which suggests that firms must go beyond their own boundaries to access such information (van deVrande et al 2009). Traditionally in action learning, there is no commitment to extend learning gained beyond the set (Coghlan and Coughlan, 2010). As a result, action learning has sometimes criticised for the fact that learning can become bounded within a single organisation or within a single action learning set, in contrast to other action modalities (Raelin xx) such as action research where sharing knowledge to a wider community (3rd person enquiry).

Discussion

Earlier we introduced the concept of boundary spanning and illustrated how, in the context of this project, NLCs act as boundary spanners across project subsystems. Boundary spanning can also occur through the use of boundary object, understood as objects which can be used to cross boundaries for example, reports, web pages, information technology systems and procedural manuals (Heldal, 2010). In the language of action research, boundary objects are articulated units of *P*.

Levina and Vaast (2005) suggest that some boundary objects are designated boundary objects, in other words they are deliberately designed to span different boundaries. Others are created for some specific use by one group or another and only emerge as boundary objects when put to use by other groups. In the example of action learning discussed in this paper, the development of case studies was conceived as a means of evaluating project progress and not specifically as a means of spanning boundaries. However, as Edmonstone (2015) suggests, action learning facilitates the process of creating explicit knowledge from tacit knowledge. This process was enacted in the project as the tacit knowledge and experience of SMEs was articulated as explicit knowledge in the case studies, providing them with an emergent function as boundary objects. Boundary object capability is manifested in a number of ways.

Firstly the case studies provided the NLCs with a window into activities at each of the other national centres. Accordingly, the case studies allowed inter-project boundaries between countries and national centres to be spanned, leading to the NLCs making changes at their own national centres based on the experiences of other NLCs and SMEs at other national centres. Secondly, they have provided P in the form of teaching case studies that will be used in upcoming project events to stimulate Q. In this way they can facilitate O, IO and therefore network action learning (NAL) according to the formula: *NAL = P* (programme knowledge) *+Q* (questioning insight) *+O* (organising insight) *+IO* (inter-organisational insight).

Thirdly, codifying SMEs narratives into case studies has provided a means of creating a repository of information for use by NLCs. As highlighted by Gearty (2015) learning is something that may not occur in the moment that an individual hears a narrative; instead there is potential that the learning may occur at another time. Providing ongoing access to the case studies exploits this potential.

A final means by which the case studies may act as boundary objects is through their planned dissemination via the project website. We cannot assume that the information in the cases can be directly applied by other SMEs, as one of the underpinning principles of action learning is that all

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problems are contextual and therefore solutions in one context may not be directly applicable in another (Burgoyne, 2010). However, there is the potential created through dissemination across the project boundary, for this programmed knowledge to stimulate learning and insight. In that way, SMEs not directly involved in project events and activities can still benefit from them.

Conclusion – Our learning

There is no single 'correct' approach to action learning and over the past several decades, different variations have been developed (Gold, 2014). In this paper we suggest that the process of developing case studies can be a useful learning mechanism for action learner in three ways:

1. the process of case writing creates opportunity for questioning and reflection within an action learning set;
2. as a means of evaluation as part of a network action learning process and;
3. to advance the concept of case study as boundary object, with a key role in advancing network learning.

In relation to the first, a key aspect of action learning is creating the potential to act and therefore to learn from the process of acting (Gold, 2014). For the NLCs, acting included of cycles of case writing and refining supported by the other NLCs in the set. The *process* of engaging in case study writing prompted reflection for NLCs on the experiences of firms, on their own experiences at their national centres and on network level interactions with other NLCs and network stakeholders. Developing case studies also prompted critical insight on the part of SME owners as they were facilitated by the NLCs to reflect on any learning and action that resulted from their engagement with P and Q during network events and how that impacted on the organisational relations at the firm and their relations with others within the network. Case study development occurred in cycles of reflection on action *away* at NLC set meetings leading to action at home in the national centres. Accordingly, the process of case writing can sit very comfortably with an action learning approach.

The multilevel focus on individual, firm and network described above is important in light of our second argument that case study development can be used as a means of evaluation in Network Action Learning. Revans initial focus in using action learning was on individual leaning. However, it has been argued that a concurrent focus on organisational learning is appropriate in action learning interventions (Vince 2004) and a growing body of literature on organisational learning provides a theoretical base for this focus (Bapuji and Crossan, 2004). In addition, organisational learning is

interwoven with inter-organisational learning and it is problematic to try to consider one without the other (Holmqvist, 2003). The aim of the network described in this paper is to develop the capacity of individuals and organisations to adapt to change and to collaborate towards improving their innovations and organisational practices. The network is a loosely coupled network and the project is a complex one, making evaluation difficult. However, developing case studies allowed NLCs to focus on a few firms at their national centre and to examine in detail what sort of impact membership of the network had on those firms. We noted previously that network action learning does not only depend on P and Q but must also take O and IO into account. By taking part in case study development, both SMEs and NLCs could develop organising insight through examining and reflecting organisational dynamics at their places of work (Vince). For SMEs this organisational insight related to the internal dynamics of their firms while for NLCs it also included insight on the dynamics within the national centres. Both SMEs and NLCS also gained inter-organisational insight by focusing on how the firms had engaged with the network, what differences in terms of learning and outcomes that made both to the firm and the network, how they might engage differently in the future (SMEs) and how they might be facilitated to do that (NLCs). Thus internal organisational dynamics and the broader social context were both taken into account. Additionally, there was concurrent focus on personal learning, organisational learning and inter-organisational learning. The literature on inter-organisational learning is limited and accordingly does not offer much guidance on how to evaluate inter-organisational initiatives (Provan and Sydow 2008). We suggest that developing case studies through action learning is both pragmatic and participative and can be one way of doing so.

In relation to evaluation, we also argue that creating case studies using action learning can provide a means of reflecting on the evaluation process itself. Burgoyne (2010) notes that there is an issue with evaluation which is instrumental in nature and focuses on testing the achievement of aims rather than critically questioning and challenging those aims. He suggests that "Science can find out if A can lead to B, but cannot establish whether B is a good thing or not" (Burgoyne 2010, p247). However, by using action learning in evaluation, space and time is created to enable a critical exploration of project progress and the appropriateness of project aims. This suggests that evaluation carried out in this way brings with it the potential to develop double loop rather than single loop learning. Single loop learning is that which is achieved from a goal driven focus where the immediate issue is addressed without necessarily addressing the underlying cause, while double loop learning results in changed assumptions, values and goals and addresses underlying issues (Argyris and Schön, 1974). By engaging in case study development, NLCs were facilitated to explore the actual and potential impact of the network on individual firms. This in turn meant that the experiences of the

firms in question impacted on the assumptions that the NLCs may have made about SMEs as well as their opinions on the best way to address SME issues, leading to double loop learning

The third conclusion we draw is that a case study can be viewed as a boundary object that facilitates boundary spanning both in terms of the process of case writing and as a finished product. Boundary spanning is a means by which organisational practices are shaped by network membership and conversely, networks are shaped by organisational interactions (REF). This occurred during the project. During case study development, SME owners were encouraged to articulate the changes they introduced at organisational level, the understanding they developed of their own organisational environment and their interaction with network stakeholders. Accordingly, NLCs were able to adapt network practices and the design and delivery of network activities to better match the needs of SMEs.

Additionally, as has been highlighted in the open innovation literature, firms that look only inwards and do not utilise the knowledge and experience of other firms put themselves at risk of stagnation (Lee et al. 2010). Yet, sometimes this type of tacit information can be difficult to share. Boundary objects are a means of making tacit knowledge more explicit. In this paper we have described the development of case studies where each case tell the story of the SME and their particular engagement with the project network. Additionally, as a set, the case studies are comparable so that a rich picture emerges of the range of firms and experiences in the project. This richness is of value in its articulation of the potential and firm-level impact of the project, as a respectful non-directive means of sharing the experiences of food producers with others as well as building up a picture of the emergent network. Thus, the set of case studies has become a repository of codified tacit knowledge and experience, useful to NLCs, SMEs and project stakeholders.

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