

Examining Ethics for an Action Research Project in an Enterprise Social Network Enabled Virtual Communities of Practice Environment.

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Abstract

The implementation of social media tools in organisations, known as enterprise social networking (ESN), provides a convenient means for staff to share knowledge in informal settings. ESN are used to support a knowledge management technique called communities of practice (CoP), and the use of ESN and CoP for organizational knowledge sharing is the subject of increasing interest and research as awareness of the benefits grows. Action research (AR) is seen as a suitable approach for studies in this field. However, given the people-centric nature of these systems, AR in this area presents considerable ethical dilemmas; brought about by the nature of AR and its research methods, and the nature of use of the ESN tools. This paper addresses how these ethical issues might be dealt with in the course of an AR study that examines how ESN can enable staff knowledge sharing in virtual CoP in a higher education context.

Introduction

This study is rooted in the complex and rapidly changing convergence of higher education, information systems, and knowledge management (KM). The implementation of KM practices in higher education institutions (HEIs) has been identified as being at low levels by a number of studies, and the consequent lack of staff knowledge sharing has a significant negative impact on the overall performance of these organizations (Cheng *et al.*, 2009; Sohail and Daud, 2009; Mavodza and Ngulube, 2012; Fullwood *et al.*, 2013; Al-Husseini and Elbeltagi, 2015). In contrast, knowledge sharing by staff in organizations has long been recognised as having a significant role to play in the development of the intellectual capital and the competitive advantage of those organizations (Nonaka and Takeuchi, 1995; McLure and Faraj, 2000; Wang and Wang, 2012; Bartlett and Ghoshal, 2013). The use of social media tools for organizational knowledge sharing, known as enterprise social networking (ESN), is gaining in popularity and has been identified as beneficial to the performance and competitive advantage of organizations (Leonardi *et al.*, 2013; Ellison *et al.*, 2014; Friedman *et al.*, 2014; Leftheriotis and Giannakos, 2014). Social media are computer-mediated tools that allow people to create, share or exchange information, ideas and media in virtual communities and networks (Kaplan and Haenlein, 2010), and the application of these technologies within the workplaces of organizations to facilitate work-related communication and collaboration is referred to as “enterprise social networks” by Richter and Riemer (2013). These tools can be used to support a KM technique known as communities of practice (CoP), described by Wenger and Snyder (2000) as groups of individuals linked together by their enthusiasm for sharing and expanding their knowledge, typically in informal settings and arrangements, resulting in the creation of inter and intra-organizational groups called virtual communities of practice (vCoP). According to Dean *et al.* (2013), an important aspect and function of CoP is increasing organizational performance

through the creation of shared identity and purpose. The objective of this research is to investigate how ESN can enable staff knowledge sharing in vCoP in HEIs.

Ng and Pemberton (2013) state that the concept of CoP has been extensively examined within the corporate context and can produce many benefits for both individuals and organizations, and, according to Wiig (1999), these benefits may also apply to HEIs. However, the majority of research into using CoP in HEIs has been done in the context of teaching and learning, and consequently very little is known about how CoP can benefit the wider HEI organization (Kimble *et al.*, 2008). HEIs are rarely to the fore in the implementation of information systems for either their teaching or corporate practices and, according to Leidner and Jarvenpaa (1995), academic institutions typically lag behind businesses by about ten years in the adoption of new technologies. This is in contrast to academics themselves, who are known to be early adopters of social technologies (Eysenbach, 2011) and research community software (Lin, 2012). Given that ESN are only recently becoming commonplace in organizations, it is hardly surprising then that they have not yet gained a significant foothold in HEIs. Accordingly, there has been little research into how ESNs might be used to enable knowledge sharing in HEIs (Ortbach and Recker, 2014). According to Nistor *et al.* (2014), where technology is employed to facilitate communication in CoP, the sustained participation of members requires the acceptance and use of the technology in the first place, and a critical mass must also be achieved (Ren *et al.*, 2012). According to Preece (2000), this critical mass of activity is required to attract other users, and without it, the perception of the usefulness of the knowledge sharing system will inhibit its use (Sharratt and Usoro, 2003).

The contextual setting for the study is a HEI with approximately 7,000 students and 600 staff, delivering a range of courses from its campuses in the mid-west region of Ireland. The researcher is a staff member with almost 20 years of service and has held both service management and academic positions. The practical aspect of the project involves the implementation of ESN tools in the organization, specifically Microsoft's social networking tool called Yammer, and the promotion and support of these to facilitate knowledge sharing in a HEI environment and the establishment of vCoP. The approach to this study embraces the researcher's place within it, and fully recognizes that a priori knowledge and existing values will invariably intrude upon the observation. From this understanding, it was considered that action research (AR) would be the most appropriate research strategy to adopt for the study. AR involves the active participation of the researcher and seeks to bring about change within the organization in which it is conducted. It is an iterative process constructed with a longitudinal design to allow time to examine changes as iterations of the research progress (Baum *et al.*, 2006). According to Baskerville and Myers (2004), the goal of AR is to solve existing practical problems while generating scientific knowledge at the same time. This study is qualitative in nature and uses a number of data collection methods, including content analysis, focus groups, semi-structured interviews and reflective journaling.

In examining how ESN can enable staff knowledge sharing in vCoP in higher education, this study is presented with a number of ethical issues, and there are certain aspects of the project and the methods used that require careful ethical consideration. Using an AR approach in itself presents a number of ethical issues that may not be present with alternative research approaches. For example, in AR, the researcher has what some authors describe as an over-involvement with the research (Rapoport, 1970; Mumford, 2001), and this can have consequences for both the researcher and the participants. Researchers and participants have to work closely together, increasing the likelihood of confidentiality and anonymity being issues (Williamson and Prosser, 2002). Because an AR project influences change in organizations, the informed consent of participants is entirely necessary. However, it may not be clear as to

exactly what they are consenting to, as neither the participants or the researcher know what actual changes may occur (Hope, 1998). To overcome these issues, a number of approaches are presented in the literature, such as the development of a mutually acceptable framework (Rapoport, 1970), following strict guidelines (Koshy *et al.*, 2010), and having an agreed set of procedures and principles (Loewenson *et al.*, 2014). The importance of an ethical code is stressed by Williamson and Prosser (2002), and Coghlan and Brannick (2014) highlight the usefulness of journaling in coping with, and exploring, ethical issues in AR.

The implementation of an ESN is a central component of the AR project and further ethical issues arise when considering the use of the ESN tools. It is important that the systems are supported by an acceptable use policy (AUP) to mitigate against any inappropriate or unsecure behaviour by users which may put the organization in danger of financial losses, reputational damage or litigation, and staff themselves in danger of disciplinary action or prosecution. According to Doherty *et al.* (2011), this is of particular importance for knowledge-intensive organizations, such as higher education institutions, and advocate the use of formal AUPs as a mechanism to reduce inappropriate behaviours. AUPs serve to protect both the organization and the users but must allow the achievement of intended outcomes without constricting the flexibility of ESN tools. Husin and Hanisch (2011) conclude that traditional development methods for AUPs are unsuitable for ESN and suggest a framework for the development of new AUPs for ESN that finds a balance between these requirements.

The remainder of this paper briefly explores both ESN and vCoP, and their relationship, before describing the research design. The ethical issues associated with the research design and methods are presented and an ethical framework to help deal with these issues is developed. Through exploring the ethical issues surrounding the research, this paper extends the limited understanding of the ethical implications of conducting AR studies in this field, and the ethical framework developed for the study may be of use to researchers undertaking similar studies.

Virtual Communities of Practice and Enterprise Social Networks

The term Communities of Practice (CoP) is relatively new although it is based on concepts of learning and knowledge sharing that are centuries old. Wenger (2011) defines CoP as 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. Although originally based in learning theory, CoP are now widely accepted as an important KM strategy. Wenger (2004) argues that CoP are the cornerstones of KM because they are social structures that focus on knowledge and explicitly enable the management of that knowledge to be placed in the hands of practitioners. According to Cox (2005), CoP are the classic conceptualization of KM as more than information management, as they are a social and not an individual or technological solution, about tacit not codified knowledge. Ardichvili *et al.* (2003), propose that CoP are efficient tools for knowledge generation and sharing because the majority of an organization's competitive advantage is embedded in the intangible, tacit knowledge of its people, and new knowledge can be produced and disseminated in conversations and networking activities. Dixon (2000) maintains the CoP model allows organizations overcome barriers to knowledge sharing that traditional, technology-based KM systems often encountered. For example, employees can be reluctant to contribute when asked to formalize knowledge and enter it into a database but are willing to share knowledge with colleagues in informal settings.

CoP are largely voluntary entities that grow organically and can exist entirely within a business unit or stretch across divisional boundaries. According to Wenger and Snyder (2000), it is not particularly easy to build and sustain CoP or to integrate them into an organizational structure. They also insist that their nature makes them resistant to supervision and interference and that

they cannot be mandated if they are to be successful, but rather the infrastructure and environment for them to thrive must be developed and nurtured. However, other research would suggest that CoP can be intentionally created or mandated (Soekijad *et al.*, 2004; Garavan *et al.*, 2007). In analyzing this research, Agrawal and Joshi (2011), conclude that CoP can be intentionally created if appropriate seeding conditions are provided by organizations, and Cox (2005) concludes that CoP are relatively informal, intra-organizational groups specifically facilitated by management to increase learning or creativity. According to Molphy *et al.* (2007), CoP need to contain elements of design and commitment, and formalize their existence through the establishment of common goals and values. They are often deliberate in their construction and seek to meet predetermined needs which have been identified by their participants or their creators. Wenger *et al.* (2002) describe the design and establishment of a CoP as more a matter of shepherding its evolution rather than creating it from scratch. Other researchers have observed that creating and supporting CoP is a strong alternative to building teams, particularly in the context of new knowledge work such as product development (Nirenberg, 1994; Stewart, 1996).

Although the concept of CoP developed largely as groups that physically met with each other, the usefulness of information communications technology (ICT) in the development and expansion of CoP cannot be underestimated. In particular, where community or team members are geographically dispersed, ICT has a significant role to play in the facilitation of meeting and knowledge sharing (Gibbs *et al.*, 2012), and in such virtual communities, the communication and coordination of work takes place online, facilitated by ICT. A vCoP can be completely online or partially online, with some members meeting face-to-face and then communicating with other remote members online. They are interactive environments that give their members the chance to engage with other members through a series of tools such as chats, document postings and community discussions at any time from any place. According to Kimball and Ladd (2004), in traditional CoP, individuals often interact between meetings in one-on-one conversations, whereas in a vCoP, the group can continue to meet as a collective in ways unbounded by time or location. Ardichvili *et al.* (2003) suggest that they are among few viable alternatives to face-to-face conversations for knowledge exchange.

The similarities between ESN and CoP are highlighted by some of the characteristics of social media. For example, Gunawardena *et al.* (2009) define social networking as “the practice of expanding knowledge by making connections with individuals of similar interest”, and social networking technologies are defined as “tools that facilitate collective intelligence through social negotiation when participants are engaged in a common goal or shared practice”. ESN tools provide the technological support for groups to move towards collective intelligence in a shared space where individuals can develop a community, discuss issues of interest and reflect on practice. According to Hoffman (2009), social networks can be useful mechanisms for creating communities, and are able to support social learning. A combination of these social networking applications can create an effective environment for communication and learning and can help to build community through dialogue and conversation (Gunawardena *et al.*, 2009). Wenger *et al.* (2002) established seven design principles for CoP: design, input, value, multiple levels of participation, the familiar and the new, all coupled with rhythm, and Eller (2012) maintains that these principles live within social media where members gather to grow in knowledge and skills.

ESN also has a considerable role to play in the capture of knowledge so that it can be preserved for future use. Within CoP, ESN can help members apply the SECI model, which turns the socialization, externalization, conversion and integration of knowledge into operationalization (Alberghini *et al.*, 2014). According to Schneckenberg (2009), social media-based corporate

platforms support dynamic knowledge exchange, representing the genuine interests and competence domains of employees, leading to the emergence of corporate information structures through a bottom-up, almost organic approach. This is highlighted as the main difference between Enterprise 2.0 for knowledge exchange and more traditional communication and KM approaches (Schneckenberg, 2009).

Research Design

The conceptual model developed for this study (Figure 1) suggests that the implementation of an ESN in a HEI, and the promotion and support of its use in vCoP, will enable staff knowledge sharing activities, providing a number of individual and organizational benefits. The objective of the research associated with this model is to examine how enterprise social networks can enable staff knowledge sharing in virtual communities of practice in higher education. A number of research questions have been developed to examine the inputs and outputs of the model in detail, and are as follows:

1. What are the antecedents for staff knowledge sharing? What needs to be in place for the successful implementation of ESN tools such that knowledge sharing will take place in vCoP.
2. What are the dominant problems associated with the implementation of ESN and participation in vCoP?

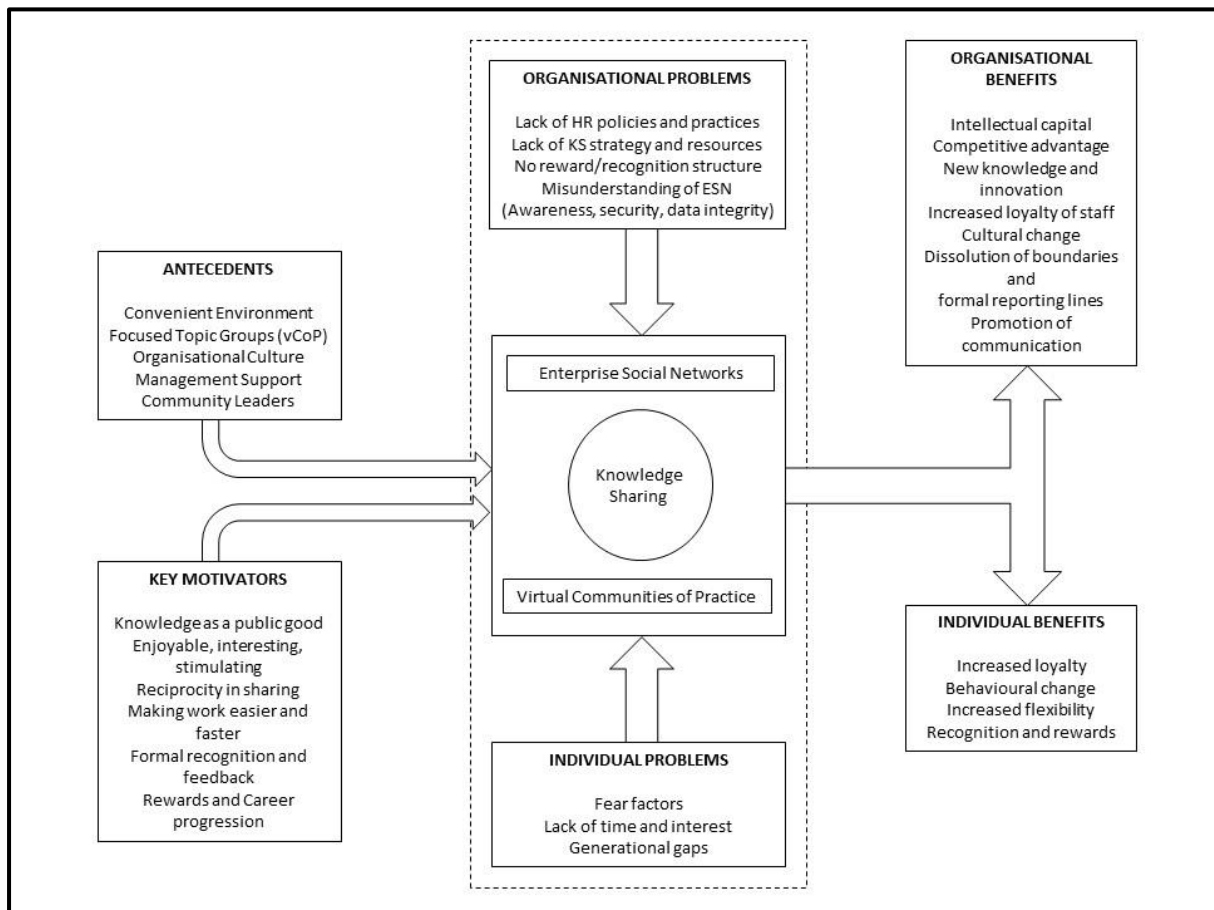


Figure 1. ESN and vCoP for Knowledge Sharing Conceptual Model

3. What are the perceived benefits of knowledge sharing for both the organization and for staff members?

4. What are the key motivators for staff to adopt the use of ESN and participate in vCoP?

To examine the conceptual model, the AR project was divided into a number of cycles and an AR model for each cycle was developed. According to Susman and Evered (1978), AR can be viewed as a cyclical process with five phases of diagnosing, action planning, action taking, evaluating and specifying learning (Figure 2). Although some of these phases may be conducted jointly, they are all necessary for a study to be truly defined as AR. This view includes diagnosing as a phase which many researchers omit, preferring to adopt the simpler four phase process of plan, act, observe and reflect (Koshy *et al.*, 2010; Coghlan and Brannick, 2014). However, it is closer to the original AR model proposed by Lewin (1946), which included defining the issue as a phase of the AR process. The first phase, called Diagnosing, involves the identification of primary problems that are to be addressed within the host organization, and is considered to be an integral part of the research design. The Action Planning phase involves the consideration of alternative courses of action for addressing the problem. The interventions to be carried out by the researcher in the organization are identified in this phase and are guided by the conceptual model (Olesen and Myers, 1999). Action Taking, sees the implementation of the planned interventions over a specified period. Following the assertion by Coghlan and Brannick (2014) that data generation in AR comes through active involvement in the day-to-day organizational processes relating to the AR project, it can be considered that data will be generated from participation in and observation of groups and individuals at work, problems being solved and decisions being made, and also from the interventions that are made to advance the project.

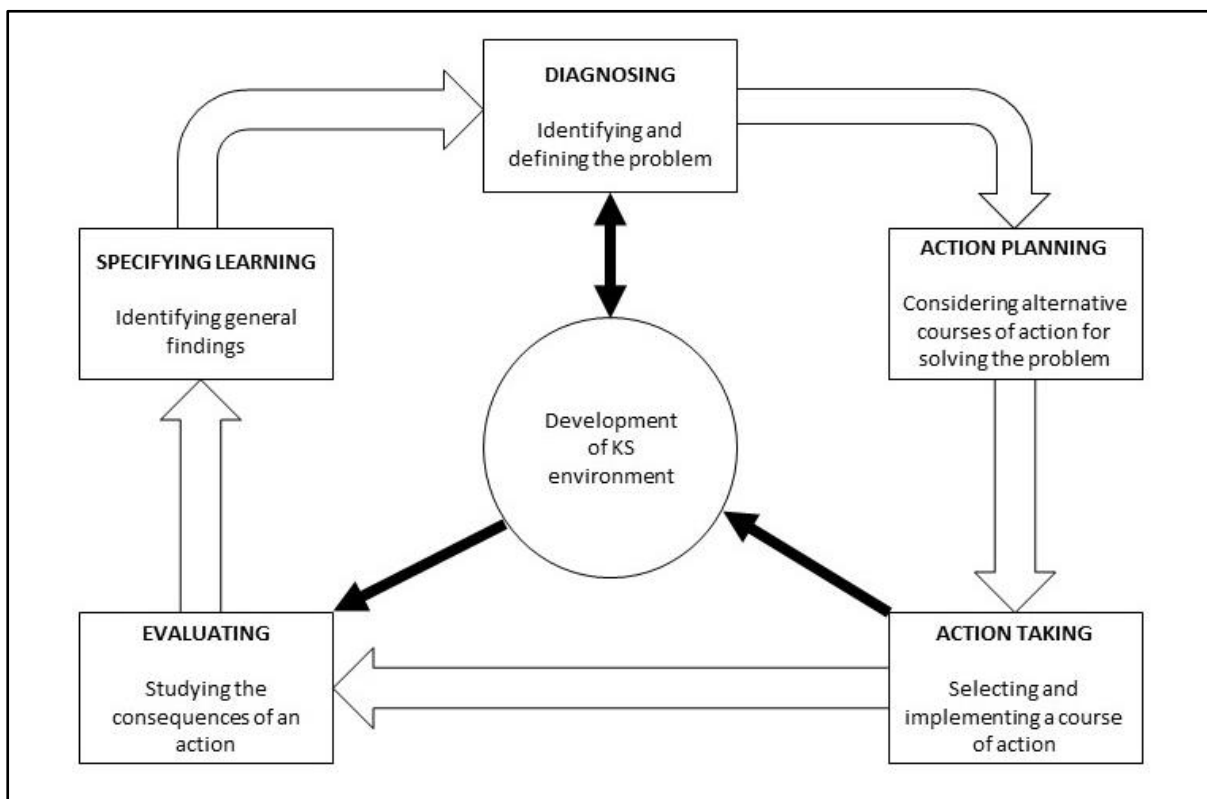


Figure 2. Phases of the AR process, adapted from Susman and Evered (1978)

Some of these interventions and observations are made in the formal context of the AR cycle design, but more are made in informal settings, through casual meetings and conversations, through emails, instant messaging and other forms of communication. Reflections on all of

these occasions and occurrences need to be documented and this highlights the importance of reflective journaling in AR projects. These written records provide an important source of data for use within the study and can be used to supplement primary data from other sources (Jasper, 2005). The analysis of reflective writing may be approached in the same way as any other narrative data using techniques such as structured content analysis. However, Scanlan *et al.* (2002) suggest the adoption of a more holistic approach, using the journal data to influence the analysis of the data collected from other primary sources. As reflective writing generates data that reflects the researcher's interpretation of the topic, it serves to focus the researcher's analytical lens to provide a unique analysis of the total data set (Jasper, 2005). For this study, reflective journaling is extensively used to capture the researcher's interpretations of interventions and any events related to the project.

The Evaluation phase analyses the interventions to determine their effectiveness relative to the conceptual model, and this phase typically involves a number of data analysis methods. The final phase, Specifying Learning, has slightly different aspects during cycles of the AR project than at the end. During the AR project, this phase will feed results into further diagnostics such that further actions may be planned for the next cycle of the project. At the end of the AR project, output from this phase is presented to the organization and the scientific community (Olesen and Myers, 1999).

This AR study consists of three cycles running over a 12 month period. Cycle 1 of the AR project is mainly concerned with the technical establishment of the knowledge sharing environment and setup of a number of vCoP. The ESN application being used for this project is Microsoft Yammer. Yammer is a social network that's entirely focused on a business. It facilitates group conversation and collaboration and has many similarities to familiar social media tools such as Facebook and Twitter. Yammer has a feature called *Groups* that directly facilitates the hosting of communities online and provides an environment where they can have conversations, share files, post comments, etc. These features make it a suitable tool to support vCoP and it was selected for this project on that basis, and due to the fact that it was already available for use without incurring any additional cost to the organization. A communities' portal was implemented to act as a collection point for all of the vCoP in the organization, and allows users to see what communities are active, join communities or create new ones. The remaining AR cycles are designed to increase use and participation rates in the ESN and vCoP. A number of data collection instruments are used across all cycles of the AR project and include content analysis, focus groups, semi-structured interviews and reflective journaling.

Ethical Issues

According to Coghlan and Brannick (2014), ethics in the context of research is normally considered in terms of the traditional empirical research paradigms, where researchers typically use subjects to obtain data. Within these paradigms, ethics refers to the basic considerations of not doing harm, maintaining confidentiality and anonymity, and data integrity. However, by following these established ethical principles, the action researcher may find themselves doing what Lee (2001) refers to as "inaction research". The approach to this study stems from a pragmatic critical realist philosophical perspective. In its attempt to describe an interface between the natural and social worlds, critical realism seems to find a practical middle ground between positivism and relativism and would appear to be a good philosophical perspective for conducting business and management research (Bhaskar, 2009). In the debate between the positivist and relativist viewpoints, other alternatives have emerged such as pragmatism, which

is a rejection of the idea that the function of thought is to describe, represent, or mirror reality - rather it is an instrument for prediction, action and problem solving. Hughes and Sharrock (1997) state that pragmatists are not worried about ontology or epistemology but rather about the particular problems they confront in their theories and investigations, using appropriate methods for the problems at hand. Both Kelemen and Rumens (2008) and Saunders *et al.* (2011) take a softer view of pragmatism, arguing that rather than completely dismissing ontological and epistemological concerns, pragmatists can work from different philosophical positions, where one might be more appropriate than the other for answering a particular question. Robson (2002) suggests that there is compatibility between pragmatism and critical realism and that the fundamental values of quantitative and qualitative researchers are really highly compatible when looked at from those perspectives. A pragmatist viewpoint recognizes that the researcher will have an effect on the research setting, and the analysis as personal prior knowledge and understanding will colour the deductions from the data analysis (Baskerville, 1999). The researcher can either attempt to minimize the effects of this intrusion or embrace it as an integral part of the research process. The approach to this study embraces the researcher's place within the study, fully recognizing that a priori knowledge and existing values will invariably intrude upon the observation (Baskerville, 1999). This approach supports the selection of AR as the most appropriate research strategy but also helps in addressing the ethical issues that are presented.

According to Mockler (2007), the ethics of AR lies at the congruence of the ethics of practice and the ethics of research, adding additional complexity to already difficult ethical questions. Just as AR itself blurs the line between research and practice, consideration of ethics for AR must also consider both. Rapoport (1970) identified ethical issues arising from the researcher's personal over-involvement with the research as one of the main dilemmas with AR and places particular emphasis on the development of a mutually acceptable ethical framework to address this dilemma. Mumford (2001) stresses that an important aspect of beginning an AR project is "to ensure that both the researcher and all contacts in the company have a clear, specific and agreed knowledge of what is to take place", and there should be no ambiguity or uncertainty. Indeed, Groundwater-Smith and Mockler (2007) stress the need for participants to be able to challenge both the observations and the interpretations of the research, and cite this as a basic requirement for AR to comply with quality norms. According to Koshy *et al.* (2010), following strict guidelines on ethical issues is of particular importance for action researchers because of the small-scale nature of the projects located within the working situations of the researcher, and special care needs to be taken both for data collection and the dissemination of findings as it would be easy to recognise people and events within local situations. Loewenson *et al.* (2014) stress the importance of evaluating ethical matters that may affect all of those involved in order to develop an agreed set of procedures and principles that meet legal and ethical standards.

According to Rowan (2000), performing AR ethically, involves building relationships between the researcher and the research participants, whether they are individuals, groups or communities. In building these relationships, a number of ethical questions arise, mostly due to the understanding that AR is a political enterprise which has consequences for both the researcher and the participants (Williamson and Prosser, 2002). Coghlan (2001) maintains that the goal of action researchers is to generate information from collected data to inform decision making, but such information can be intensely political. Therefore, action researchers have to be politically astute in order to successfully negotiate organizational politics. During the course

of an AR project, an organization's political climate may be exposed, perhaps unintentionally, and power relations may come under scrutiny, with possible consequences for the researcher (Williamson and Prosser, 2002). The insider aspect of the action researcher working within their own organization should guarantee an understanding of the organization's power structure and political culture, and ensure that the researcher can operate in a manner that is in keeping with those conditions without compromising the project or the researcher's position (Coghlan and Brannick, 2014).

As researchers and participants have to work closely together, others in the organization may know who participated and may be able to identify who said or contributed what, such that the preservation of confidentiality and anonymity may become an issue. The issues of confidentiality and anonymity extend to the research methods being used in the study which, in this case, are focus groups, semi-structured interviews and content analysis. In dealing with focus groups and interviews, participants must be given the opportunity to request that any of their comments be erased from transcripts (Barbour, 2008), and all data gathered using these methods should be completely anonymised before analysis. Content analysis may present other difficulties for the researcher in that informed consent for participation in focus groups and interviews tends to be clearly understood by participants, but this may not be the case with content analysis. According to Rourke *et al.* (2001), informed consent is the biggest ethical issue for content analysis research and may require the researcher to go to great lengths to obtain consent or strip non-participant postings.

An AR project influences change in organizations so, although the informed consent of participants is entirely necessary, it may not be clear as to exactly what they are consenting to. According to Hope (1998), because AR is a journey involving participation, action and reflection, the idea of informed consent is not as meaningful as with other research approaches, as neither the participants or the researcher know where the journey will lead in advance and what actual changes may occur. Meyer (1993) believes that the traditional understanding of informed consent is inadequate for AR, and sees participant cooperation as always forced to some degree, contradicting the ethos of willing collaboration. Kelly (1989) argues that informed consent should be viewed together with other ethical principles, but should not be the overriding one. According to Smith (2008), informed consent should not be a solitary activity at the commencement of a project, but an ongoing and negotiated process throughout the project. Change within an organization or to people's working conditions may be met with resistance and this may also present the researcher with difficulties. Williamson and Prosser (2002) point to the establishment of an ethical code for action researchers and extensive collaboration so that participants own the findings as much as the researcher, as ways of addressing these dilemmas.

An additional problem of AR proposed by Rapoport (1970), is that the researcher can be faced with a goal dilemma, that is, how to manage the practical expectations of the project with gaining sufficient research outcomes. The researcher must remain mindful that the research aims will be achieved, will also delivering on the practical improvements to practice that the project sets out to deliver. Because of the participation of the researcher, AR is sometimes criticised in terms of what Baskerville and Wood-Harper (1998) refer to as "consulting masquerading as research". Care must be exercised by the researcher to ensure that the research remains rigorous and this can be achieved by detailed documentation of methods, interactions,

observations and the maintenance of the reflective diary throughout the project. Coghlan and Brannick (2014) highlight the usefulness of journaling in coping with and exploring ethical issues in AR and pay particular attention to the reflective aspect of this practice. This view is supported by Smith (1999), who indicates the significant influence of written reflections on the ethical and methodological rigour of a study. According to Greenwood and Levin (2006), AR is essentially a balancing act between three elements: research, participation and action, and this study aims to ensure that a balance is achieved between these elements.

The ethical complexity of this research is further extended by the implementation and use of ESN and vCoP at its core. The use of ESN for communication and collaboration amongst staff presents a relatively new challenge for organizations. Using an ESN presents risk to an organization and an AUP is the most effective risk mitigation tool available. Although most organizations have AUPs in place for information systems and even social media, these are not particularly relevant to the manner in which ESN is used. At the heart of this lies the conflict between the inherent flexibility of use of ESN and the control focus of traditional AUPs. According to Doherty *et al.* (2011), another problem with traditional AUPs is that their primary role tends to be a mechanism for dealing with unacceptable behaviour, rather than being proactive through the promotion of desirable and effective behaviours, highlighting the negative aspects rather than accentuating the positive ones. David (2002) concludes that the tendency to develop strict policies can be due to previous negative experiences and perceptions, and these can restrict and limit social based technologies, through effectively discouraging their use.

Because ESN is internal to an organization, the focus of the AUP should not be IT security related, another aspect of traditional AUPs. The content of an ESN is visible only to the staff of the organization and not to anyone outside of the corporate network. Therefore, the focus of the AUP should be one how staff use the ESN to communicate with each other, with attention paid to how corporate information is shared on the ESN, and to ensure that it is used for the purposes of the organization. Having an overly negative AUP can serve to stifle the growth of an ESN as staff will view it as being restrictive and controlling and consequently will be reluctant to post content or participate in conversations. However, the AUP does need to provide guidelines for use that offer sufficient protection for both the organization and its users. Husin and Hanisch (2011) suggest a more practical and non-authoritative approach may help an organization to harness the benefits of their ESN. This requires a full understanding of social media and their use within organizations by policy makers, in order to ensure that AUPs remain flexible but still provide the necessary guidelines and protection to employees and the organization.

Ethical issues presented by staff forming, and participating in, CoP also require some consideration. According to Wenger (2010), there are many constraints, impositions and demands on CoP, including external factors over which participants have little control. CoP may not be harmonious or egalitarian and conflict may arise as a result. Because CoP are self-governed, all sorts of undesirable things may be produced, such as racism or corruption, and may be dysfunctional, counterproductive or even harmful. A CoP can be a place of “collective mediocrity or contribute to systematically counterproductive patterns” (Wenger, 2010). In order to mitigate against a CoP developing any such characteristics and delivering the organizational and individual benefits that are the very reason for its existence, a number of

pre-emptive measures can be taken, including the development of a code of ethics, or a framework for the CoP to work within, and training for participants and community leaders. Wenger (2010) maintains that the performance of a CoP will be dictated by the behaviour of those who are engaged in it, despite whatever efforts are made to dictate, shape or mandate practice within it. However, the more that participants understand the concepts, workings and purposes of CoP, the more likely they are to conduct themselves in a manner that will provide a positive contribution to the community. Furthermore, having an established set of principles and guidelines will help both community members and leaders to work within parameters, and provide support should something go wrong.

Developing an Ethical Framework

The development of a mutually acceptable ethical framework involves negotiation between the researcher and the host organization, but this may be problematic as the goals of the researcher and the organization may differ substantially. The researcher must not lose sight of the fact that they must be of value to the organization in which the research is based (Baskerville and Wood-Harper, 1998), highlighting the importance of both parties negotiating their goals. According to a number of authors (Wenger and Snyder, 2000; Paroutis and Al Saleh, 2009; Zboralski, 2009; Wang and Noe, 2010; Mosha *et al.*, 2015), management support is a prerequisite for the establishment of a successful knowledge sharing environment, therefore executive management backing for the project must be agreed and attained prior to commencement. For this study, senior management were engaged at an early stage. The background to the project, the planned interventions and the potential participation of individual management personnel were all discussed in detail and approval for the project was achieved at the outset. A satisfactory balance was found between the practical goals of the creation of the knowledge sharing environment, and the theoretical goals of the research in examining the behaviour of staff within the knowledge sharing environment.

According to Baskerville and Wood-Harper (1998), researchers must clearly brief participants concerning the experimental nature of the action taking and the iterative nature of the research process. In seeking the informed consent of participants, issues of confidentiality and anonymity need to be addressed. However, participants must have a very clear understanding of the unique aspects of an AR project that may present difficulties with providing guarantees of confidentiality and anonymity before consenting to participation. For this study, the informed consent of participants was obtained separately for the different data collection instruments, with appropriate information sheets provided for each. The nature of focus groups and semi-structured interviews are somewhat different in their execution, and it is important that participants have an understanding of how these sessions are conducted and data gathered, before agreeing to participate. The use of content analysis as a data gathering instrument in such a study may be more problematic in obtaining informed consent. When they are joining vCoP and using the ESN, participants are informed that content analysis will be conducted on postings and comments. However, this may have the negative impact of limiting participation by community members through fear that their postings will be accessible by those external to the group.

Walker and Haslett (2002) suggest that ethical issues in AR should be grounded in the AR cycle itself. Accordingly, ethical questions should be posed around the cyclical activities of diagnosing, action planning, action taking, evaluating and specifying learning. The processes

of ensuring confidentiality and anonymity, obtaining consent, and balancing different and conflicting needs, are actualized during these phases. During each phase of the AR cycles, the researcher should examine carefully who will be affected and how will they be affected. Table 1 presents the approach that was taken for dealing with the ethical issues that were encountered during each phase of the AR cycles for this study.

The AUP for the ESN should include rules, code of conduct and practical guidelines, be positive, constructive, and in line with organization policies and culture. Its focus should be positive and explanatory, encouraging use by providing positive examples and suggestions. It should also require that any content posted be related to the business of the organization. The role of senior management in the development and implementation of the AUP is crucial, and according to Husin and Hanisch (2011), it is essential that they are seen to use the ESN themselves whilst adhering to the policy. This serves to assist in improving relationships with staff and empowering the AUP such that it is not seen as a control tool. This study used a framework proposed by Husin and Hanisch (2011) to develop an AUP for the Yammer installation in the case site. This framework is based on an understanding of the legal obligations and impacts for employees while remaining a degree of flexibility to allow the organization to benefit from the ESN. The AUP requires users to accept it before they can join the ESN, helping to ensure that activity on Yammer is positive, constructive, and in line with the organization's policies and culture. It is primarily positive and explanatory, providing examples and suggestions, and it requires that content is appropriate and relevant to the organization. The availability of training for ESN users is another important factor in ensuring correct use of the system, and supplements the advice provided in the AUP. Training is available for all ESN users and training materials are also accessible on Yammer on an ongoing basis.

According to Rohde (2004), a code of ethics for CoP should be developed as a working document and finalised as a process of negotiation between community members. In this way, the development of a code of ethics will support the process of establishing a CoP (Lave and Wenger, 1991). It should include such things as a criteria for membership, the structure of the community, the participatory introduction and adaptation process, the nature of content, guidelines for information management, roles and access rights, privacy and confidentiality matters, cultural aspects of cooperation and trust, and guidelines on etiquette and behaviour (Rohde, 2004). A number of these will be common for all communities within an organization and the organization should have an established baseline document that a newly formed CoP can use to facilitate the negotiation process for their own set of operational guidelines and code of ethics. Such a transparent negotiation process undertaken by a new CoP should contribute to the building of trust and social capital within the community, and lead to a set of agreed commitments by the community members that will provide the CoP with a solid foundation on which to develop. The availability of training for CoP members and leaders is also an important factor in the success of a community. Increasing the understanding of the concepts, purpose and functionality of a CoP, including the roles and responsibilities of leaders and champions, can help to ensure the viability and stability of a community over time. While it is very important to provide training during the embryonic phase of a CoP, supplementary training material should also be made available on the ESN for continual reference.

Ethical Issue	DIAGNOSING	ACTION PLANNING	ACTION TAKING	EVALUATING	SPECIFYING LEARNING
Personal over-involvement of the researcher	Develop a research philosophy that confronts and deals with this dilemma	Plan AR interventions that minimise the involvement of the researcher where possible	Implement interventions in a manner that minimise the influence of the researcher where possible	Ignoring personal relationships during data analysis	Present findings in an impartial and professional manner
Power structure and political culture	Engage with management from the beginning	Obtain management support and approval	Develop and demonstrate political astuteness	Understand the organization's power structure and political culture	Illustrate and disseminate findings according to the organization's power structure and political culture
Confidentiality and anonymity/Recognition of people and events	Obtain ethical approval from relevant Ethics Committees	Plan how data will be collected, analysed and stored	Provide necessary reassurances of confidentiality and anonymity during data collection	All data gathered should be completely anonymised before analysis	Written findings should contain no personal references or means of identification by position
Informed consent	Obtain ethical approval from relevant Ethics Committees	Develop appropriate information sheets and consent forms	Clearly brief participants concerning the experimental nature of the action taking	Give participants the opportunity to request that comments be erased	Erase comments from transcripts as necessary
Resistance to change	Recognise that goals may not be achievable because of this	Account for resistance to change in planning interventions	Note occurrences as part of reflective journaling process	Analyse why there is resistance to change	Develop interventions for further AR cycles that can minimise resistance
Goal dilemma	Develop and agree organizational and individual goals with management	Ensure that practical and research goals are compatible	Ensure that practical and research aims are achieved through reflective journaling	Analyse reflective notes to resolve goal dilemmas	Present findings that clearly delineate practical and research goals
Acceptable ESN use	Understand existing organizational policies	Develop an AUP and suitable training for ESN use	Implement AUP and training	Analyse suitability of AUP for ESN usage	Revise AUP as necessary
CoP participation	Agree management support for the introduction of CoP	Develop organizational code of ethics and training materials for CoP	Facilitate development of code of ethics and operational guidelines for individual CoP and provide training	Analyse impact of code of ethics and training on CoP performance	Revise code of ethics and training as necessary

Table 1. Ethical Issues and approaches for each phase of the AR cycle

Conclusion

To undertake a research project, the researcher normally has to seek the approval of a Research Ethics Committee or similar body. However, ethics should not be viewed as a series of boxes to be ticked to comply with a set of procedural conditions. Rather the ethical approach should become embedded in the researcher's practice in a substantive and engaged way. This is particularly relevant for AR projects as AR presents a number of ethical issues that are additional to the issues that are present in other research approaches, largely due to the direct, inside involvement of the researcher within the research setting. Conducting AR in the area of knowledge sharing using ESN and vCoP presents further ethical issues with regard to how the systems are used and the communities conduct themselves. It is important that the researcher plans and agrees an ethical framework for the research project with the host organization, providing guidelines for the researcher to work with from the outset of the project. In confronting the ethical issues and developing an ethical framework, including an ESN AUP and code of ethics for CoP, this study should be of interest to other practitioners and researchers working in this area. This paper also provides a contribution to the limited understanding of handling ethical issues in AR studies in the knowledge management arena.

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