SOCIAL NETWORKS, SOCIAL MEDIA AND ABSORPTIVE CAPACITY IN REGIONAL SMALL AND MEDIUM ENTERPRISES (SMES) IN AUSTRALIA

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ABSTRACT

Small and Medium Enterprises (SMEs) are major sources of prosperity and employment and are viewed as critical to regional development in Australia. A key factor to foster productivity and growth in SMEs is their ability to identify, acquire, transform and exploit external knowledge. This ability, referred to as the 'absorptive capacity (AC)' of a firm, depends on formal and informal processes of socialisation by developing relevant and extensive informal networks (also referred to as social networks). This research explores how Australian SMEs in regional areas harness their Social Networks (SNs) and Social Media to acquire external knowledge towards innovation. A qualitative case study research approach is followed to collect data from 12 SMEs in regional South Australia using interviews as the key data collection instrument. Findings suggest that although SMEs draw on informal and formal SNs to acquire new knowledge, 1) this process is intuitive and SMEs should be made more aware of the value of these networks, 2) the use of Social Media to support social networking activities to acquire new knowledge is scant and 3) SMEs require more educational support to enhance their knowledge of the value of SNs and social media in acquiring new knowledge towards innovation.

INTRODUCTION

In Australia, a Small and Medium Enterprise (SME) is described as a business that has between 20 and 200 employees (Baron, 1995; Meredith, 1994). A report by CSIRO indicates that SMEs comprise 95% of Australian Business, employ 45% of the workforce and generate approximately 5% of sales (Barnes and Kennard, 2002). Considering the size and vastness of Australia, SMEs are important entities to foster business growth and innovation in regional Australia (Evans and Sawyer, 2010). Not only do they contribute richly to the Australian economy, they also serve regional communities by providing services and job opportunities that would have been impossible otherwise.

SME's limited access to key resources imposes a major challenge in terms of innovation, which in turn impacts on growth and feasibility. While larger organisations have the luxury of formal and informal communication channels and extended networking capabilities with external partners, the absence or limitation with respect to these activities in SMEs may hinder their growth, development and learning. Due to their inability to foster learning activities through research and development, SMEs also miss opportunities to advance their product and service-related knowledge. These aspects may force SMEs to focus their attention more outwardly to gather expertise and research-related information from sources in their external environments. However there is no research that explores how SME's external environments could supply the required information and knowledge to foster growth and innovation in these entities.

The ability of an organisation to acquire, adopt and distribute external knowledge to the benefit of the organisation is referred to as its *Absorptive Capacity* (AC) (Volberda et al., 2010; Zahra and George, 2002). AC has been described from many perspectives since it links to theories that relate to learning, innovation, cognition, social capital, supplier and client integration, human resources, organisational structures and knowledge management. The ability of an organisation to source ideas from its environment and 'absorb' this in the form of new knowledge is essential for organisations to sustain their competitive advantage and innovative capabilities. This ability is important for large organisations, but crucial for SMEs in regional areas in order for them to be sustainable and innovative.

A different strand of the literature focuses on Social Networks (SNs) as informal structures that play a key role in facilitating the sharing and transfer of knowledge within and between organisations. Past studies have focused on the supportive and enabling role of SNs in a number of different contexts such as problem solving, supporting the adoption and appropriation of Information Technology, the sharing of knowledge and sourcing of expertise (Bosua and Scheepers, 2007; Bosua and Mendoza, 2010). SNs may also exist in a more formalized form with both formal and informal networks being internal and external to the organisation. These networks, complemented by Social Media (for example web-based and mobile-based technologies) have been hailed as a basis for the flow of ideas in the form of new knowledge between people in large organisations.

Due to the smaller number of employees and informal management structures in SMEs, SNs may play a prominent role to foster the flow of knowledge in these entities. In terms of external networks, there is a gap in the literature that explores how external networks, in combination with social media, are used to acquire knowledge from external sources for SMEs. Therefore, the research question on which this paper is based is: *how do SMEs acquire new knowledge from external sources and how do social media support this process?*

In an attempt to find an answer to this question, this paper is structured as follows: the next section that follows revisits key background literature that relates to SMEs, AC, SNs and social media. Thereafter follows the Research Methodology section that outlines the approach followed to conduct this research. Key findings are shared in the Case studies and Findings section followed by the Discussion and Conclusion Sections.

BACKGROUND LITERATURE

Australia has more than 1.2 million SMEs which makes them invaluable to the Australian economy. Currently, more than 5 million workers are employed by SMEs representing 63% of the Australian workforce, while they contribute about 35% to Australia's Gross Domestic Product (GDP) (Gadenne and Sharma, 2009). As a result, it makes SMEs one of the largest employers in Australia. SMEs are important in the Australian context for a number of reasons: they contribute to the Australian economy, they provide essential job opportunities, and by supporting business activity in regional areas, they add to the financial growth of Australia as a whole (Wiesner and Millet, 2012; 2008; Wiesner et al, 2007).

SMEs are unique and quite different to large organisations since they tend to have less formal organisational structures and informal management practices. In addition, they usually have a centralized management structure with the owner/manager making most of the key decisions and contributing most or all of the operational capital (Evans and Sawyer, 2010; Cragg & King, 1993). SMEs are considered to be 'time-poor' and focus mostly on conducting their key business, while they are also more concerned with survival as opposed to growth (Garengo et al, 2005). While there has been extensive research on the management of SMEs, literature indicates that these entities may be subject to business failure due to poor risk management strategies that relate to inadequate informed decision-making and financial instability. The latter is reflected by SMEs exposure to higher levels of risk which may be attributed to aspects such as access to key resources in terms of funding, customers and markets, knowledgeable and competent staff, research and development and technology (Barnes et al., 1998; Nelson et al, 2010).

Considering the limited access that SMEs have to knowledge, it is essential that appropriate structures be in place to support SMEs to enhance their existing levels of expertise and foster growth and innovation opportunities. These structures need to foster the sharing and flow of information and knowledge to ensure that new ideas actually flow into and through the organisation. Considering the limited resources of

SMEs, Chong et al., (2011) describe the importance of inter-organisational knowledge transfer in SMEs from a competitiveness perspective.

A number of studies focus on inter-organisational knowledge sharing and transfer in large organisations (Bayer and Maier, 2006; Easterby-Smith et al., 2008; Perez-Nordtvedt et al., 2008). These studies confirm the importance of networks to share and transfer knowledge while further studies confirm specifically that SNs contribute to more effective and efficient knowledge sharing in large organisations (Bosua and Scheepers, 2007; Malouf, 2007). In particular, the role of a person's environment and the SNs he or she can tap into are important. It has been shown that who you know has an impact on what one comes to know since the relationships one has with others impact on obtaining information, solving difficult problems and learning how to conduct one's work (Cross et al, 2001). A SN consists of a collection of dyads, or a set of nodes. Each node represents a person in a network while a tie represents the relationship that exists between the nodes or persons. The ties can be loose or tightly knitted together (e.g. when there is a strong relationship or friendship between 2 persons) and can be based on work, advice, or friendship. Ties in SNs are important since they are carriers of information, knowledge, and resources that flow through them. Ties can be face-to-face or electronically mediated through social media such as mobile technologies or the Internet. Malouf (2007) distinguishes between social and business ties, while also proposing that the strength of ties is important. Strong ties in a SN represent a strong relationship with frequent flows of information or knowledge through these ties, which indicate that there is frequent contact between the nodes. Weak ties on the other hand represent the contrary. Strong ties are considered important in the transfer of tacit knowledge and form the basis for information seeking and learning in SNs (Borgatti and Cross, 2003).

Additional research on SNs also describes the role specific individuals take on in SNs to encourage or promote the sharing and transfer of knowledge. Such roles include brokering, advocacy and gatekeeping roles in particular (Wenger, 1998). Brokering roles serve as bridges to link people from different networks while advocacy roles push information of relevance to nodes that need specific information. Gatekeepers are individuals with informal contacts outside the organisation and play a key role in importing novel information and linking the organisation with its environment (Obstfeld, D., 2005).

The creation and sharing of tacit knowledge is essential, however difficult in organisations from an innovation viewpoint. Knowledge consists of two interwoven yet distinct parts: tacit and explicit knowledge. Tacit knowledge exists in human minds and is by nature difficult to articulate since it is intangible and 'hidden'. Explicit knowledge on the other hand is tacit knowledge that can be articulated into tangible form through the spoken word or in writing by documenting knowledge. As tacit knowledge is difficult to impart, a dedicated effort is required to convert it into an explicit form. Some forms of tacit knowledge develop over time through socialisation, learning and internalisation. These processes are also important to convert tacit knowledge into explicit knowledge.

There is a close link between knowledge and innovation, since innovation involves knowledge creation. Organisational innovation concerns the ability of an organisation to design and implement changes to its existing products, services, structures and processes. Such change is important for two reasons: 1) the business context often requires continuous change to attain competitive advantage, and 2) change is also important from an organisational learning perspective (Borgatti and Cross, 2003). There is a large body of literature that describes organisational learning and the effect it has on the firm. Crossan et al., (1999) describe organisational learning as a principal means of achieving strategic renewal in an organisation. Such renewal requires the firm to explore and learn new ways of doing things or conducting business, while concurrently exploiting what they already know or have learned. Crossan et al., (1999) describe how learning can appear at three different levels namely the level of the individual, group and organisation.

The notion of organisational learning forms an essential part of an organisation's *absorptive capacity* (AC). AC refers to an organisation's ability to recognize the value of new knowledge, assimilate this knowledge and apply it to the advantage of the firm. More formally Zahra and George (2002:186) define AC as "…*a set of organizational routines and processes by which firms acquire, assimilate, transform and exploit knowledge to produce a dynamic organizational capability*". The latter can culminate in the development of new products and services (Volberda et al., 2010, Zahra and George, 2002). AC depends on an organisation's existing knowledge and background and therefore the *acquisition* of knowledge concerns an organisation's ability to identify relevant external information. This ability requires the organisation to know what knowledge it requires and where the knowledge is to be sourced. *Assimilation* of knowledge relates to an organisation's ability to take up this newly acquired knowledge through routines and processes that analyse, process, interpret and understand the knowledge. *Transformation* concerns the addition or elimination of knowledge by combining it with existing knowledge into new and innovative ways. Finally, *exploitation* is an organisation's ability to embed acquired and assimilated knowledge into an organisation's routines and operations in order to yield new services or products. In this paper we will focus on the *acquisition* of new knowledge in SMEs.

Considering the characteristics of SMEs, there are a number of challenges that SMEs face, for example, limited access to knowledge sources and expertise, smaller number of employees or experts in these firms, absence of Research and Development units or functions, and limited use of technology to support SME operations. For example, regional small businesses often do not realise the value of using the Internet and e-commerce to improve the sustainability of their firm (Evans and Sawyer, 2009). Based on the description of SNs and value they bring as conduits of knowledge sourcing and sharing, there is a gap in the literature that explores how SMEs acquire external knowledge. Moreover, there is no literature that explores this issue in combination with the role that social media can play to support this process. Hence the focus of this study is to explore how external SMEs acquire new external knowledge and how Social Media can facilitate this process.

The next section describes the research methodology followed to collect and analyse empirical evidence associated with this study.

RESEARCH METHODOLOGY

Due to the exploratory nature of this research, a qualitative case study approach was followed. Case studies are arguably the best research strategies to investigate contemporary phenomena within a real life context (Yin, 2003). Potential case organisations were identified by Regional Development Australia (RDA) for regional South Australia. RDA, a non-profit community-based organisation, fosters regional economic growth through the provision of information and Government priorities and programs. The aim was to identify SMEs that operated across a range of industries. Eventually, twelve SME case organisations in the South Australia region were approached and agreed to participate in this study.

Interviews lasted approximately 60 minutes and focused on participants' rich experiences and opinions of how SNs were used and supported by social media to acquire new knowledge from external sources for innovation (Shultze and Avital, 2010). The interviewers were particularly interested in events that triggered the need for new knowledge, how new knowledge was acquired from external sources, what external sources were important from a knowledge and innovation perspective, and the enabling role of social media in these activities. Questions were also asked about supportive mechanisms that could help SMEs take advantage of external knowledge.

Interview questions were semi-structured and open, giving each participant the opportunity to elaborate on key aspects. All interviews were audio-recorded and transcribed verbatim. Two interviewers conducted the first four interviews together; one interviewer focused on the interview questions while the second interviewer made notes and added additional questions as deemed necessary to revisit or clarify points made in the course of the interview. As both interviewers developed a mutual understanding of the format and style of the interviews, subsequent interviews were shared between the two researchers.

Once the data was transcribed, an analysis of the content was carried out to extract specific themes that emerged from the data (Miles and Huberman, 1989). Two of the researchers worked through the transcribed data separately and combined forces thereafter to compare and discuss identified themes. This enabled both researchers to verify and validate findings. More cycles through the data followed, which enabled the clustering of themes into more specific categories and the drawing of inferences with respect to causal effects that came up in the interviews. The next section outlines key findings from the various cases in the form of major themes that emerged from the data analysis.

CASE STUDIES AND FINDINGS

This section first introduces the twelve case organisations outlined in Table 1, by providing more background information about each case in terms of who was interviewed, the type of business and size of the business. Half of the interviews were conducted with SME managers while the other half were conducted with participants who both owned and managed the SMEs.

Pseudonyms (P1, P2, P3, et cetera) were used throughout the study to protect the identity of each case organisation. When referring to the participants in this paper, the type of business is also included, e.g. P1-Cleaning. Additionally, we provide exemplars of key themes that emerged from the data analysis: 1) the role of SNs to acquire external knowledge, 2) the supportive role of social media in acquiring new knowledge and 3) supportive mechanisms to help SMEs take advantage of external knowledge.

Table 1: SME case organisations, key business type and SME sizes

Participant / Interviewee	Business Type	Classification as Small or Medium Enterprise (No, of Employees)
P1 Owner / Manager	Cleaning	Small (5-19)
P2 Owner / Manager	Accommodation	Small (5-19)
P3 Owner / Manager	Real Estate	Small (5-19)
P4 Owner / Manager	Cleaning	Small (1-4)
P5 Manager	Finance	Small (1-4)
P6 Manager	Education	Small (1-4)
P7 Manager	Construction	Small (5-19)
P8 Manager	Automotive	Small (1-4)
P9 Manager	Stevedoring	Medium (20-199)
P10 Manager	Accommodation	Medium (20-199)
P11 Owner / Manager	Dental	Small (5-19)
12 Owner / Manager	Accounting	Small (1-4)

1. The role of SNs to acquire new knowledge:

Owners/managers and business managers indicated that both their informal and more formal (business) SNs helped them to get access to new ideas through social contacts:

- *Informal SNs*:

Two participants indicated the value of their informal SNs. Participant P1-Cleaning commented that *"…. nowadays I seem to make a lot of friends who are mostly into business, life isn't a party anymore, I'd rather sit there and learn from someone and I'm starting to get more and more information now than I ever have been, so its really my social life that's giving me knowledge"*. This participant was also extending her SN through new contacts which deemed beneficial: *"You are making contact and you are learning things no matter what's going on [in her town], definitely because I had no information for years and years and nobody would give me any"*.

Participant P3-Real Estate confirmed that his supportive network was most helpful. He moved to a regional area from the larger city and commented as follows on the importance of his community network: *"It was difficult for me when I first got here from out of town, fortunately I met a couple of people who brought me into the community network [social network], networking is what we do"*. He mentioned the importance of SNs and the fact that people were unaware of the value of their networks *"I think people have networks, they just don't know they have them and they don't know how to use them"*. He was also of the opinion that business people often do not know how to use their business networks: *"People who have a business in the mainstream don't know what a network is and they don't know how to cultivate that network. They see it as some form similar to Amway, but it's not, it's a matter of using the people you know and treating [using] the people you know to generate your business"*.

Formal (or business) SNs:

Two of the participants indicated that their formal (business) SNs were also key external sources for new knowledge. One SME participant, Participant P12-Accounting indicated that his professional association was his primary source of external knowledge by stating: *"My professional association I rely on a lot - that is the core source of technical information"*.

Another sme owner/manager, participant p3-real estate, indicated that people in his sn were mostly formal contacts:" *there's a lot through the local government and also through my political contacts with a local member"*. He indicated how he generated links in his sn through business contacts: *"i tend to generate mine [network links] through business"*. Participant p6-education was of the opinion that smes fail since they do not use their external formal sns enough to source knowledge: *"business fail because they have this grand idea but they never source the information [or knowledge from their formal external sns], they need to see if an idea is a workable idea where we source information [from]"*.

Participant p7-construction indicated that the absence of expertise in his own sme forced him to extend his sn to other formal sources that could fill this knowledge gap and complement his existing knowledge: "*if we take on this major job, there is a small portion that we don't know about – like a job we're doing down the coast here involves a couple of radios. We don't do radio's but we have a sub-contractor who does radio's stuff so we ask them to supply radios and configure them to do this job*". Through contacts in his sn he could extend his smes normal operations to do jobs that he would otherwise not take on. He acknowledged gaps in his firm's knowledge, which could be enhanced and complemented with outsourcing: "*any knowledge that we don't have for a job, we will seek from outside sources. If we are not confident that we can cover our risks with those sources, then we don't tender the job*". As a result he was able to implement a new service when required, which extended his smes innovative capabilities.

This participant also indicated that formal SNs in the form of suppliers and partnerships were key sources of external knowledge that added to his SMEs innovative capabilities: "*Suppliers. We have partnerships with a couple of bigger electrical suppliers. If we don't know how to configure certain pieces of equipment, we will go to them for knowledge and ask for advice.* The manager, Participant P7-Construction, further mentioned that these external sources ran workshops, which extended his existing SN to include new external sources (nodes) with key knowledge: "*They [external suppliers] also run knowledge workshops if they bring out new products, they will invite us along*". The manager also indicated that for gaps in his own knowledge, he would approach an expert within his company and if this expert also lacked the knowledge, then that person would tap into the external (formal) supplier SN for advice: "*As far as them getting knowledge, they get knowledge from their suppliers and what not*".

The activity of sourcing new knowledge from external SNs such as formal suppliers was confirmed by Participant P8-Automotive: "*As far as new ways of getting things done, that comes straight from the suppliers. We have regular visits from suppliers – they are always coming in to show their new products*".

Participant P11-Dental was affirmative about a variety of formal SN sources that provided new knowledge: "*It comes back to the official sources for me – part from identifying what your markets are looking for, the dental trade people where people come up with all sort of new and interesting things. There's the university where we still have access. There's the professional body [body-name]*". This participant also indicated the value of one of his SNs – a professional group that he is a member of: "*I am a member of that [professional body], which is a group of specialists and GPs like myself, who provide these type of work. We have a meeting once a month and everyone presents cases and things we have done. Everyone gets the benefit from everyone's idea*".

2. *The supportive role of social media in acquiring new knowledge*

Ten of the twelve participants were cognizant of the role of social media (the Internet and mobile technologies) and their support for SNs to source new knowledge. Participant P1-Cleaning indicated that social media was important in her business as she got her business idea through searches conducted using the Internet: "*I looked a little on the Internet and thought well no one is doing it so I am going to start it here, that*

was my snap decision, I'm going to do this and this and this …. and I used all this research and came up with the final idea – so the Internet was my key and the [Internet] forums. I am on worldwide cleaner forums, its all business people and they talk about the pitfalls of it, the highs and new technology, they all try to help – I can only look and learn but I have something for them – I'm not allowed to tell them until I have actually started to know it properly and see what I can do, then I can tell them and they'll love it and that's talking to the world".

The same participant was fully aware of the support that external SNs and some social media sites could provide: *"Since I joined [a professional body] I got lots of emails, I've gone to a couple of meetings and continue to go to them. I know that if I have a problem that I can ring them [people from this professional body].* This owner/manager indicated that she knew that social media was important, but felt that she was uneducated in terms of using all the different types of social media to gain knowledge from external SNs. Although she was confident in using Internet forums, she did not feel confident with Facebook or Twitter: *"I'd love to put that on Twitter but I don't know how. They say you should use Facebook and Twitter. How does Twitter work? How does Facebook work? Do you have to pay for it, I don't want to go and join up everything and it's going to cost me a fortune and I don't know what I am doing".*

However Participant P1-Cleaning indicated the lack of her own technical knowledge or know-how to design a website for her SME: *"I've just tried to do a webpage – it wish I had done IT at uni, I'm thinking I should do a bit of a night course, and I'm struggling a bit to set it all up – I have no knowledge whatsoever.. I have made a page but I am not even sure if the rest of the public can see it".* She also indicated that she needed help with some of the social media technologies: *"I will have to get the kids to have a look at that one, and Twitter I don't even understand, I went to a meeting once and all this Twitter stuff, I just don't know how to get into it and who's going to listen to my Twitter – I have no understanding about it to understand, I would love to take some time off to understand it so that it's better networking for me".*

Participant P3-Real Estate indicated that they had a Website and Facebook page, but did not use it for the sourcing of new knowledge, but rather as part of doing their business: *"We use Facebook for information dissemination. Facebook and the website is just part of doing business. Technology is very key to our business these days; it's also how we manage our data these days.* This participant further indicated that he was wary of using social media to facilitate the sourcing of new knowledge. He was sceptical about a tool such a Twitter and indicated that it might not be conducive to the sourcing of new knowledge in his business: *"With the type of business that we do, we don't wanna know what we're doing with your house sale. If you're buying a place, you might not want to share that knowledge with other people who might be on the same Twitter feed as mine. I have seen examples where the advertiser is personalising an advertisement. They are relying on your network to do that e.g. one of the staff managed to sell a house because it was owned by someone well known".*

Participant P6-Education was of the opinion that the use of social media (e.g Facebook) to acquire external knowledge was time-consuming: *"The person who is looking after my website has convinced me that it is important in the business sense to expand*

into social media, I don't want to deal with it personally because its time consuming…. Personally I think that those sort of social media [Facebook] is a waste of time, its too invasive as well, people are telling me they are walking their dog, I think it's just useless information out there". However, this manager was impressed by the use of mobile phones and other IT to complement SNs: *"So we can send [calendars to instructors] to their phones and I am actually finding it a lot better than emailing. Because their calendars and their workload are put on our Intranet site and is only accessible by people with a password, I find that brilliant. The person who is designing our website it showing me how to utilise IT to cut down on my workload like sending things on my phone. I have always had a computer of course but never been flash with IT".* This participant acknowledged that IT is something for the future and indicated that he needed to learn more and rely on technology: *"I reckon I need to rely on the technology, it's the future and I need to jump some hurdles and make some changes, so yes very relevant".*

Participant P8-Automotive indicated that he signed up to LinkedIn to enable him to get access to people external to the organisation: *"There's also LinkedIn as well, I don't know if its fully developed or people are just signed on to it and getting networks. I haven't received a great deal of information through LinkedIn yet. …I have signed on to a network of friends and acquaintances through business but I don't know the usefulness of the knowledge through that".*

Participant P10-Accommodation indicated that Google served as a useful tool to inform his organisation about trends in similar or other businesses and thus served as a mechanism to find external knowledge: *"We quite often Google what's happening in our own hotels. So we quite often see what are trends around other hotels and we try to bring it here. We find that out from the Internet and not from any other source, going directly to the Internet, Google is the best invention ever".*

Participant P11-Dental indicated how online videos were useful sources of new knowledge for new ideas in his work – i.e. one could observe new procedures specialists were doing: *"There are a number of procedures online that you've not done before, you can observe one's that the specialist is doing. [Organisation Name] that provides our products are very good at this. They have lots of online surgical tutorials where you can watch guys all over the world do this stuff and you can replay them again".* This participant confirmed how important the Internet was for him as a source of new ideas: *"I live on the Internet. We are into pretty well everything, so when you are surfing the Net you could go, oooh that's a good idea".*

Participant P12–Accounting was rebuilding his SME's website and was conscious of the social value of the Internet: *"There's the whole social aspect of the Web".* He indicated that he used forums to source knowledge *"I use Whirlpool which is a forum and I get stuck into a few questions there – basically crowdsourcing a knowledge pool of people that sort of care. I wanted to do a reverse percentage calculator on a spreadsheet. So there's a formula that you can use to get that done. So yes there is new knowledge coming in, you just have to ask and if you get to the right place, you get help".* He also indicated that he used email lists to source new knowledge from the Tax Institute and Smart Company: *"So I am sourcing all these information [knowledge] which is all free. You always have to go back to the original so I get a lot off the ATO – I see notifications on one of these things but then you go*

back to the ATO website to see the ruling or the case because I just don't believe just because something is on the Net doesn't make it true. I always go back to the actual source to find if it's actually true". This participant also described himself as an introvert in which case he preferred online networks as opposed to face-to-face networks: *"I know that face-to-face networking should be done, but I'm just not that sort of personality".*

Participant P12-Accounting further indicated that he was reliant on his professional association as an external source of information [knowledge] to its members and based on this, they developed a portal with auditing standards: *"They have just introduced a portal where you can go and there's a link to their standards and their auditing standards. They are slowly getting to the point where if you need knowledge that's where it is…".* He indicated that it was a useful source of external knowledge for him as he did not know everything. He also mentioned that he was dependent on Internet forums which he frequently visited: *"Another place is Betty Curtis who writes all the MYOB books and she runs a forum that people can ask questions and people like myself answering them. I started off there asking questions and now I answer them, it's a good learning thing".* He found online social networking effective and efficient for business networking: *"There are informal networks through the forums and I talk to people I Sydney and Melbourne as if they are at the end of the road. They are in similar business and as an accountant I can service anyone in Australia".*

3. Supportive mechanisms to help SMEs take advantage of external knowledge

Overall, the general feeling from participants was that learning and formal education were important and necessary to assist SMEs in taking advantage of external knowledge to foster innovation. However, some participants indicated that formal learning and education programs were required to raise individuals' level of learning. Participant P5-Finance felt more could be done in this regard with respect to education from Universities and TAFEs, other professional bodies and even just through making material available on the Web: *"There is a role for Uni or TAFE, we need more courses offered at our local TAFE and Uni".* This aspect was confirmed by two other cases (Participants P8-Automotive and P12-Accounting). Participant P8-Automotive indicated that his SME already had adequate technical knowledge but lacked management, financial and administrative expertise which could be offered through Universities or other professional bodies (such as RDA): *"The support would need to be in the management, financial or administrative areas and we would need to be somehow financially compensated".* The manager of the Accounting firm (Participant 12-Accounting) indicated that the sharing of external knowledge that relate to others' experiences (e.g. lessons learnt and best practices) would be helpful: *"Papers, reports and case studies where other people's experiences are examined and information that is public and freely available, possibly electronically available on the Internet on a pull basis with provision for a push service on request. Access to this should be broad as it is difficult to define what you don't know till you know it. Therefore there would need to be a broad access to wide ranging fields of information when in gather mode and pools of deep knowledge when in investigative mode".* This participant also indicated that online short courses would be worthwhile: *"Possibly short courses available online. Open university has the facility to*

enrol in individual subjects of interest without having to be part of a degree. However the course costs are difficult to justify at these levels. I think this model could be expanded to enable enrolment in specific courses of interest across the wider university system". The manager from P12-Accounting indicated further that the RDA should be facilitating short one or two day courses on a needs base to enhance the skills of different types of SMEs: "*Facilitating short day or two day courses on specific subjects … identifying particular needs would be an issue as knowledge is new at many different levels, e.g. a course in small business is not new to me but would probably assist an electrician about to enter a small business*".

DISCUSSION

This study explored the following research question: *how do SMEs acquire new knowledge from external sources and how do social media support this process?* Based on evidence emerging from the study it was clear that links to informal external SNs (in the form of social acquaintances) and more formal external networks (i.e. professional bodies or other formal networks such as for example suppliers) were useful to source external knowledge to create new ideas in SMEs. However, it was clear that a large number of SME owners and managers who were interviewed were not fully cognizant that they had SNs and how to exploit them more effectively as a vehicle to increase innovation. It was clear that networking activities were intuitive without a deeper awareness that network nodes and ties (people and relationships) required nurturing and conscious care to foster the spawning and spreading of new ideas. Additionally, owners/managers were unaware of specific roles that could be identified in SNs to ensure that new ideas are continuously imported into SMEs. For example, the notion of assigning a 'gatekeeping' role to specific individuals to encourage the flow of new knowledge into an SME was never mentioned. One participant (P1-Cleaning) indicated an increasing awareness of the importance of social contacts as being part of one's informal SN. Due to the nature of the P3-Real Estate business, where continuous building of networking is required to gain more knowledge about potential sales, this owner/manager was fully confident with networking activities but indicated that people do not exploit these external social networking activities as they should. Overall, it was clear that SMEs were using their informal and formal SNs intuitively to acquire external knowledge. Considering this, it may be useful to create a more direct awareness in SMEs of the value of their SNs to acquire new ideas, share and inject complementary external knowledge between SMEs.

A few organisations were linking to formal SNs through professional organisations or bodies, and perceived these as useful sources of external knowledge. E.g. the P-12 Accounting participant indicated that his professional association was his primary source of external knowledge. The P3-Real Estate participant echoed this, while the P6-Education participant hinted that organisations could make more use of formal external SNs. The P7-Construction manager indicated he could complement gaps in his SME's skill set by drawing on formal SNs that were external to his SME (such as formal suppliers and partnerships that have been forged over time). The P11-Dental participant indicated that he had a number of formal external SNs that were

important for the generation of new ideas in his SME and mentioned in particular the value of his alumni and professional body in this regard.

A few of the SMEs indicated that they were confident in using social media to get new ideas from their external environments. Some of the SMEs indicated that they did not have adequate time to invest in learning new technologies while one of the participants (P1-Cleaning) was concerned about extra costs of joining Facebook or Twitter. One participant (P12-Accounting) was dubious of the authenticity of information available from the Internet but acknowledged that he preferred online networking to face-to-face networking. Overall, it was clear that some SMEs were not confident in using social media to support their social networking activities nor had adequate technical skills to fully exploit social media to support social networking activities. A few SMEs indicated that they found the use of specific forums useful and indicated specifically that they got new ideas through the sharing of knowledge in these forums (P1-Cleaning and P11-Dental). One participant indicated that he was cautious of using social networking technologies such as Twitter (P3-Real Estate) while another participant did not feel confident in using Twitter or Facebook as social media tools (P1-Cleaning). Another participant regarded the use of social media as a waste of time (P6-Education). The P8-Automotive participant joined LinkedIn to give him access to people from outside his SME, although he was not sure that LinkedIn really added to his networking abilities at the time of conducting the interviews. The P6-Education participant felt the use of mobile technologies to access his calendar and Intranet content was encouraging and indicated that technology skills is something for the future. However, it was surprising how limited the use of social media was in most of the SMEs which may suggest that skills improvement programs may be required to improve IT skills of SME employees with respect to the use of social media. This may engender more confident use of social media to facilitate social networking activities with external SNs.

Finally, it was clear that participants perceived a gap in the overall levels of experience of SME employees and that specific-, or more targeted short courses or workshops were required to improve the overall educational level of SMEs. Specific reference was made about the value of online courses or the sharing of best practices through the web for specific industries. This emphasizes the need of regional SMEs to be linked with their respective industry types to be aware of trends in similar industries. Participants P5-Finance, P8-Automotive and P12-Accounting indicated the need for specific programs (from Universities, TAFEs or other professional bodies) to educate SMEs on innovation, while the P12-Accounting participant indicated that he would value the sharing of experiences and best practices between SMEs in his industry type particularly through making online material available. He also indicated the need for short courses and programs to help SMEs foster their skill levels. Consequently, professional bodies and other educational institutions may need to identify how and to what extent educational programs can be offered to improve the awareness and skill levels of SMEs with respect to ways in which they can take advantage of external knowledge to generate new ideas. Such programs may first need to assess the educational needs of SMEs in different regional areas in

Australia and develop specific supportive educational programs, short courses or workshops accordingly. This highlights also the need to make specific online programs, reports, papers and case studies available to SMEs using the Internet.

CONCLUSION

This research highlights the importance of formal and informal SNs to acquire knowledge from external sources that SMEs can exploit for innovation. Based on the findings, this study indicates that SMEs have not yet fully embraced the advantages of SNs to import new knowledge from the SME's external environment. It is also clear that there is no focus on dedicated activities to build and nurture SNs and establish specific roles such as gatekeepers and knowledge brokers to acquire and source external knowledge from an SME's environment. On the other hand, a number of SMEs were aware of the value that social media can play (e.g. internet forums, mobile technologies and other social networking technologies) to support the acquisition of external knowledge in SMEs. However, case study evidence indicates that there is a general lack of technical knowledge and skills of SME employees. As a result, SMEs cannot fully embrace the potential that social media can offer to support social networking activities. Examples of this include the limited use of Twitter, LinkedIn, mobile technologies and other social networking tools. Evidence further indicates that SME managers feel that there is a need to provide specific training courses or workshops that can make SMEs aware of the value of external knowledge for innovation, and educate SMEs with respect to specific aspects that can foster innovation. It is proposed that professional bodies (e.g. RDA) may need to assess specific educational needs of SMEs, and develop courses and workshops accordingly that may help SMEs extend their competency levels with respect to social networking activities and the supportive role of social media.

Finally, this research has some limitations. Only a few SMEs from one specific region (South Australia) participated in this study. It is planned to extend this study to include SMEs from other states from regional Australia to get a more representative idea of SME needs and competency levels across Australia and identify ways in which innovation in SMEs can be fostered and supported.

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