Building Capacity in Small Businesses for the use of the Internet: A Study of 'Outer' Suburbs in Australia

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Abstract

There is a great deal of research investigating the use of the Internet by small businesses for communication, finding information and setting up websites. It is now well known that the three major barriers faced by these businesses in using the Internet are: restrictions in relation to the level of capital, time available to them, and a general lack of knowledge of how the technologies can best be leveraged to support their businesses. This paper shows that when faced with limited time and capital, small businesses often turn to established 'informal' networks for advice on how to conduct many aspects of their business.

This paper reports on the initial results of a scoping study being conducted with micro-businesses (with 5 or less staff) in two growing 'outer' areas of Melbourne, a major city on the south coast of Australia. The study, jointly conducted by Monash University (in the 'East' of Melbourne) and Victoria University (the 'West') is unique in that it not only examines the use of Internet technologies by micro-businesses, but it also highlights the consequences of the lack of formal support networks. In particular, the study shows that potential frameworks to link micro-businesses, community-based organisations (CBOs) and universities in the two areas – although highly desirable -- do not exist. The building blocks to assist micro-businesses to use Internet technologies still need to be laid down.

Pilot interviews were carried out by the project team with micro-businesses, community-based organisations and policy makers in both universities. In this paper only the results of the micro-business interviews are reported. The interviewed micro-businesses were adopters and influenced heavily by the Internet, without exception, even as they might resist adopting it in practice. As enterprises they endure pressure from both above and below. On the one hand, central authorities (such as franchisors, suppliers) expect them to use Internet applications for efficient large-scale management, while on the other hand, customers, clients, patrons, and members put pressure on them to have up-to-date products and services, at a cheap price, and quickly, expectations which can be assisted by good Internet use.

Introduction

This paper is a result of the first stage of a joint study by researchers in the Centre for Community Networking Research (www.ccnr.net) at Monash University and the Electronic Commerce Research Unit (http://www.businessandlaw.vu.edu.au/ecru/) at Victoria University. Both universities are in the suburbs of the Melbourne, the capital city of Victoria (a southern state in Australia). Each of the universities has recently been making 'policy noises' about the need to engage their local communities. Having an interest in the use of information and communications technologies (ICTs) in small businesses (businesses with up to 20 employees) and community based organisations (CBOs), the team members of the project are particularly interested in whether there is any intersection with the needs of the three groups (universities, small businesses and CBOs). Our specific interest area is in any nexus between the groups in relation to the use of ICTs for capacity building and/or the promotion of local networks.

Background

Small Business and ICTs

Australia has a large number of small businesses: 'In June 2004 there were … 1,269,000 non-agricultural small businesses in Australia', 33% employing less than 4 people (ABS 2004. Burgess and Wenn (2005) recently compiled a list of 'barriers' to the successful implementation of ICTs in small businesses. Table 1 lists these barriers.

Table 1: Typical Barriers to the Use of ICTs in Small Business (Source: Burgess and Wenn 2005**).**

Barrier	**Comment**
The cost of IT	Small businesses often have difficulty in justifying the cost of ICTs as they generally have limited budgets.
Lack of time to devote to the implementation and maintenance of IT	A typical small business owner-manager will work 50-60 hours per week.

A lack of ICT knowledge combined with difficulty in finding useful, impartial advice	There is usually no person in a small business whose job is devoted to supporting the ICT function. As such, the 'expertise' often comes from friends, accountants, family members and/or 'ICT savvy' employees.
Lack of use of external consultants and vendors	Small business owners typically have a mistrust for ICT consultants and vendors, believing that they do not really understand their true business needs.
Short-range management perspectives.	Often small business owner-managers are so busy with the day-to-day operations of the business (and cash flow) that they feel that they do not have the time to plan much further than the next day, week or month ahead. This reflects a lack of understanding of the benefits of planning for the longer term.
A lack of formal planning or control procedures.	
A lack of understanding of the benefits which ICTs can provide, and how to measure those benefits	Most small business employees understand the many of the efficiency and cost-saving benefits that ICTs can provide, but do not understand how ICTs can be used for competitive advantage. They are often viewed as a cost and are not budgeted on a cost-benefit basis.

The table summarises the factors leading to 'resource poverty' in relation to small business use of ICTs – limited money ('cost'), time and information about how to use ICTs effectively (knowing when to use external vendors, adopting formal planning and control procedures and knowing how to measure the benefits of ICTs). The final factor highlights the need for effective capacity-building, relating to the use of ICTs within small businesses. When aware of the capabilities of ICTs, they can then think about their use for fostering and supporting local networks.

In relation to capacity building for ICTs, Burgess and Sellitto (2005) observe that an approach that small businesses often take is to call on informal or formal support networks amongst industry, community, or even family. Formally, these can support business or professional relationships and allow swapping of ideas or useful contacts (Fink 2002), or can just involve use of family members or friends for advice (Burgess 2002). Burgess and Sellitto (2005) reported on three studies of separate types of small businesses (bed-and-breakfasts, wineries, and import/export businesses) where the majority of participating businesses had relied upon some type of informal network as a principal source of advice for the use of ICTs.

The majority of small businesses are micro-businesses, with one to five employees (Holmes & Gibson, p 15). For these businesses, the barriers of money, time and knowing how to use ICTs are exacerbated further. When based at home, these businesses are known as homebased businesses. In this paper, we will be concentrating upon micro- and homebased businesses. At June 2004, it was estimated that 68% of all Australian small businesses were homebased, involving 1,040,000 people (ABS 2004).

Community-based organisations are non-profit, non-government organizations which serves a local community's needs. CBOs can take many forms: some examples being schools, sporting bodies, community centres, or charities. CBOs resemble non-profit small businesses in many ways (and could probably be classed as small businesses in many instances), but their special service characteristics and looser support structures make them a group to categorise separately for the purposes of our study (Lyons 2003). For instance their revenue sources are often government grants or donations, as opposed to the sales revenue deriving from a small businesses. Although this paper is about small businesses, CBOs form an important part of our overall study and the results in this paper refer to them as a group. Put simply, CBOs build social capital, as opposed to financial capital (Denison et al. 2003).

A Framework for the Use of ICTs

A number of authors in this paper prepared a recent report prepared for the Australian Government Department of Communications, Information Technology and the Arts (Schauder et al. 2005), which centred upon the development of a draft information economy strategy for Australian civil society. The report suggested that (p 2):

> There is much that the effective use of Information and Communication Technologies (ICT) can do to strengthen the capacity of civil society to carry out its roles, ranging from local sports clubs and neighbourhood houses to international emergency aid.

In addition to calling for government to listen and respond to the "diverse voices" of Australian civil society, the report suggests the "on-going development of standards to guide ICT application and use across Australian civil society". The report goes on to label these the "LIAISE standards" (literacy, information and content, access, infrastructure, support and evaluation). A brief description of each aspect of the LIAISE standards follow. Each aspect needs to be in place to ensure the successful use of ICTs.

Literacy
- Knowing how to access ICTs.
- Knowing how to use ICTs.

Information and Content
- Knowing how to finding information using ICTs (relevance, timeliness).
- Being able to communicate using ICTs.
- Delivering content using ICTs.

Access
- Having the resources to access ICTs effectively ($$$, time).

Infrastructure
- The Infrastructure in place to access ICTs (such as cables, and so forth for Internet access).

Support
- Technical support services for ICTs.
- Knowledge support services for ICTs (knowing how to set up, use, and maintain systems), or
- contracted support services.

Evaluation
- Knowing how to evaluate the success of ICTs.

Some aspects of the LIAISE standards are often put in place by governments (such as appropriate infrastructure). However, we feel that the LIAISE standards can also be applied to small businesses, by mapping the three barriers to effective ICT usage (limited money, time and information about how to use ICTs effectively) to the LIAISE standards, as suggested in Table 2.

Table 2: The link between LIAISE standards and Small Business Barriers to the use of ICTs

LIAISE standard	Small Business Barrier	Description
Literacy	Information	How to access and use ICTs.
Information and Content	Information	Finding information, communicating and delivering content.
Access	Money, Time	Having the resources to devote to the use of ICTs.
Infrastructure	External (e.g., Government)	Having the Infrastructure in place for implementation of ICTs.
Support	Information	Supporting ICT systems.
Evaluation	Information	How to evaluate the success of ICTs.

The number of times that 'information' is mentioned as a small business barrier in Table 2 may provide a hint as to why we are so interested in capacity building, and in the use of formal and informal networks, in our study.

The Study

Figure 1 shows how the researchers in the study viewed the project. The diagram represents how we see small business fitting in the LIAISE standards. The idea is that suitable *infrastructure* would be provided by governments and/or large businesses (such as telecommunication companies). Knowledge of how to *implement, use and support* ICTs then combines with the existing infrastructure to set up a situation where individual businesses or CBOs would be in a position to use ICTs. Assuming that they have the *money and time* to devote to ICT implementation, they could then concentrate on the use of ICTs for *finding information, communication or delivering content* and be able to *evaluate the success* of the ICTs. As stated, in this paper we are reporting on the results of the study from the small business viewpoint.

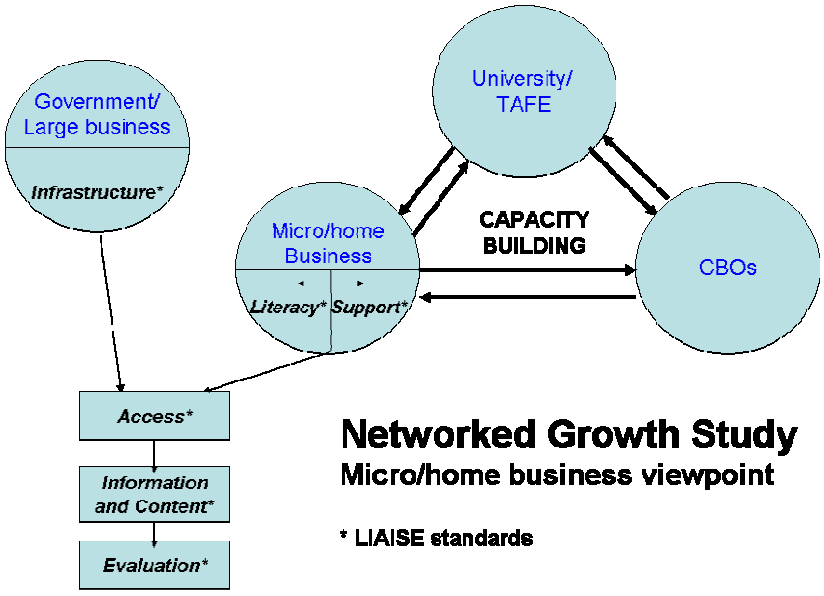
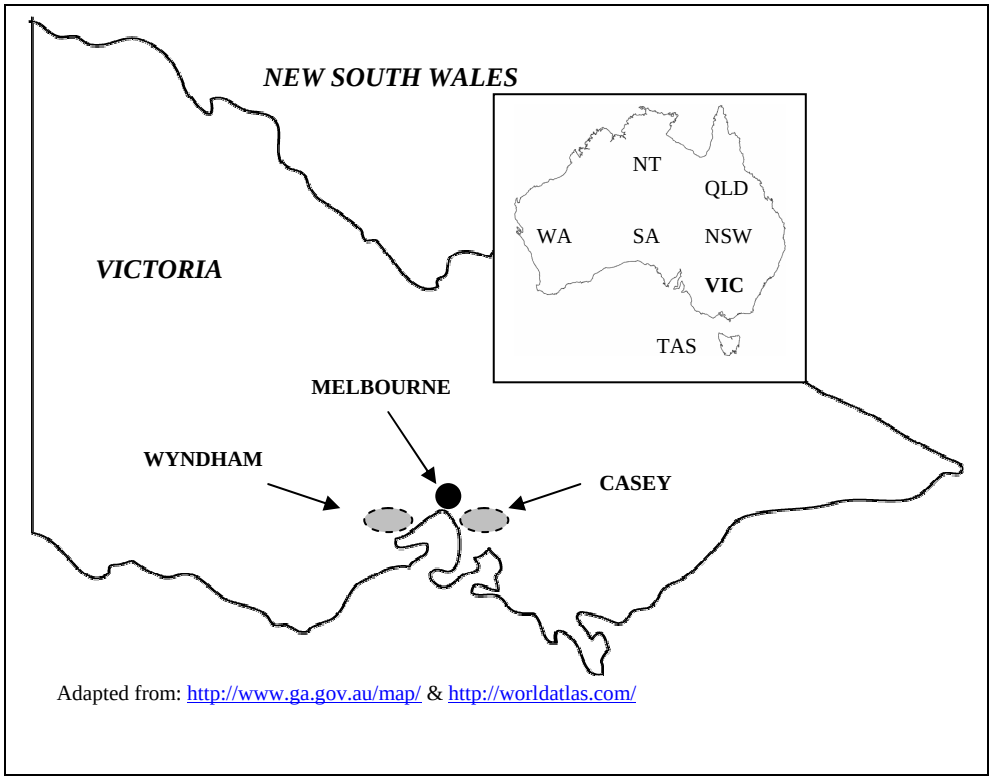


Figure 1: The Framework for the Study

Initially, we wished to conduct a scoping study to get some type of idea of the networks formed by micro-businesses and their approaches to capacity building. We also wished to study two areas that could possibly be 'engaged' by our universities. In the case of Monash University (in the eastern suburbs of Melbourne) this area was Casey. In the case of Victoria University (Western suburbs), the area was Wyndham. In both cases the areas could be described as 'outer suburban' areas of Melbourne.

Figure 2: Map showing the location of Casey and Wyndham



Adapted from: http://www.ga.gov.au/map/ & http://worldatlas.com/

In this initial phase, we did not aim to generate a sample of businesses that was random. We were specifically after businesses that were willing to talk to us through an interview process so that we could get a 'feel' of what was happening in the areas.

The selection process commenced in March 2006. Initially a sample of small businesses was gathered from the YellowPages.com. It was decided to telephone a selection of small businesses to gain an idea of the response rate we may have to contend with. After 15 phone calls we found that none of the small businesses were interested in participating, most indicating that they were too busy!

Our next approach was to attempt to email small businesses - sourcing email addresses from the Casey council small business directory http://www.casey.vic.gov.au/homebusinessdirectory/. The limitation of this approach is that only small businesses with email addresses could participate. After a large sample of small business email addresses was located we began to email the small businesses individually. Of an initial sample of 50 Small businesses that we emailed, 20 email addresses bounced back [1]. Of the 30 valid invitations that were sent out, we received only two expressions of interest. One interview was conducted the following day, the other small business said that they were too busy for a telephone interview but would be happy to fill out a survey in their own time. There was a similar low response rate (one interview from 40 email invitations) in Wyndham. Again, we found that this approach was too time-consuming and inefficient for sourcing interviews.

[1] It would be interesting to investigate why these small businesses stopped using email, or, if they have changed email addresses, why the addresses have not been updated.

Our next method was to resort to 'boots and leather'. This involved the researchers 'hitting the streets' in the localities and approaching businesses in their workplace. A limitation is that most on the street businesses tend to be retail. In the same week a press release was emailed to three newspapers, *The Werribee Times* and *Werribee Banner* (western suburbs) and the *Berwick Times* (eastern suburbs). Only *The Werribee Times* replied positively, and subsequently published the article on the inside front cover page (although it was cut down significantly). We received one expression of interest from this approach. One positive aspect of this approach was that the business that read this article would not have been reachable by any other means (the owner had a different day job and did not advertise its email address). The following week an article was published in *The Berwick Times*, however no small businesses replied to the article.

In early April, interviews were commenced in Werribee using the 'boots and leather' approach. Of 10 businesses which were approached, 4 businesses participated. It took approximately half a day to conduct this sortie, and was extremely taxing. The number of interviews was restricted to four for the following reasons:

- We had interviewed enough retail enterprises.
- This approach is not conducive to interviewing – customers interrupt and the interview is rushed.
- After lunch most businesses appeared to be much busier than they were in the morning.

That afternoon, a number of interviews were set up with small businesses in Wyndham (using the YellowPages.com sample) by telephoning them, which proved more successful. A benefit was that these were not retail businesses.

A similar technique was used to set up interviews in Berwick, using a combination of the techniques that had been adopted to identify a varied and purposive (but not necessarily representative) sample. Table 3 provides a breakdown of the final number of businesses that were interviewed in each area. One Casey interview was removed from the results as it was a small business with 14 employees, larger than the rest of the cases. All of the other businesses were micro- or homebased businesses. These could be one and the same in fact, i.e., a micro-business run from home. If they are not labeled 'homebased', they are run from a retail shop.

Table 3: Outline of Businesses participating in Scoping Study

Casey Businesses			**Wyndham Businesses**		
	Business Activity	Type		Business Activity	Type
1.	Online promotions	Homebased	1.	Bicycle store	Micro
2.	Bookeeper	Micro	2.	Frames and art	Micro
3.	Heath foods – retails	Micro	3.	Wine store	Micro
4.	Florist	Micro	4.	Photos/frames	Micro
5.	Panel beater	Micro	5.	Bows and arrows	Micro
6.	B&B	Micro	6.	Mechanic	Micro
7.	Picture framer	Homebased	7.	Inn	Micro
8.	Tutoring/educational	Homebased	8.	Web design	Homebased
			9.	Caravan Park	Micro

Results

The results are now analysed using aspects of the LIAISE framework.

Infrastructure

Most of the businesses (65%) had some type of Internet connection. This accords closely with the Australian average of 62% of small businesses with access to the Internet (ABS 2004). The majority of these were broadband connection. There were, however, some revealing stories.

When the owner of a bicycle store was considering locations to set up his business, one of his key thoughts was access to broadband. Initially he was under the impression that the retail strip he is located on would have access to broadband. However, after setting up shop he was told that there was "*not enough space for him on the exchange*". There are other strange stories along the strip about broadband access, for instance, the large hardware store which has broadband. The manager was told that he would have to wait until November 2011 for a broadband connection. As a result he uses a slow dial-up connection, and he commented that this impacts on the types of activities he can perform online.

A website development small business said that it has a DSL connection in the home office, however, it was a struggle to get this up and running -- it took years to have access to DSL. The interviewee believes this is because of the large number of new estates in the area, and as a result the older part of town suffers. The interviewee continued to say that the business not having access to cable is a problem, it holds it back: "*cable is more beneficial for us' …"more efficient*" *...."instead of taking a few minutes to upload something we could do it in a shorter time."*

A florist owner commented that she would like to use the Internet from within the premises but it is too costly and difficult. At the moment she has a telephone, fax and EFTPOS machine, and these tools need a telephone line. She can manage all of these on one telephone line, but she would not be able to add the Internet onto this as well. She said that she had a technician in to investigate what could be done, asking in particular if an ISDN connection could be added. There was no follow-up from the technician. This owner said that in Scotland she had an ISDN connection and that it was very beneficial to the business she was running. It allowed her to have running all the technological tools she had in the store at the same time, that is, Internet, telephone and fax.

The conclusion at this point is that even although the majority of businesses have broadband connections, there were still many issues in relation to infrastructure that require improvement.

Capacity Building and Networks: Literacy, Support, Access and Evaluation
Literacy, Support, Access and Evaluation are the areas of the LIAISE framework that are focused on capacity building. From our point of view we were interested in how the businesses build capacity for the use of ICTs and what formal and informal networks they might use for these (Otis & Johanson 2004). Some of the businesses indicated that they used more than one source for this purpose.

A large proportion of interviewees (59%) indicated they were 'self-taught'. Almost a third indicated that they turned to a partner of family member for support. Only two indicated that they attended a university-level short course. There was also mention of telephone support for Internet banking and the use of chat groups for support.

Some typical responses were:

- A florist owner said that she preferred to teach herself. When she was considering what software to implement in her florist she accessed the Internet and researched the product that she wanted to buy (MYOB). Then she taught herself from the manual and telephoned MYOB who provided her 24-hour support whenever she needed. When there is a technical problem she asked the employee in the computer store two shops down.
- A manager of a photo store said that he had used a Victoria University course on how to use MYOB. To find out about this course he contacted his local council. This manager was quite enthusiastic about any type of local capacity building initiative whether it be from Council, CBOs or universities.
- A panel beater administrator said that when she gets stuck she calls on her husband, or for more expertise she calls upon her 18-year-old daughter who is quite Internet savvy. Likewise, a health food shop owner said she calls on her daughter who is a PhD student for assistance.
- A picture framer said that usually in the past, her colleagues have assisted her if she experiences computer difficulties. Also in regards to Internet banking she said once she rang up the bank and they gave her "*step by step instructions on how to do things*". She felt she didn't need any further assistance, support or training in ICTs for work purposes. At the workplace there is just the one computer system, which she already feels she can operate confidently and doesn't feel the need for any extra help with.
- A tourism operator said that due to the high level of ICT interaction required with the tourism industry, she has had to learn to become ICT literate relatively quickly, despite no previous knowledge in the area. She explained "*what you need to remember is that I learnt to write using a quill and slate*". Since they bought the business, the owner had to attend a small TAFE course in IT, but mostly she has learnt through trial and error on the job. She considers herself as Internet savvy and computer literate as she needs to be for her job.
- A tutor said that her computer and Internet skills are largely self-taught. She bought her first computer in 1999 and a friend helped her load on some programs, including the Internet. Initially she referred to the 'Windows for Dummies' manual, but soon wished there was a manual called 'Windows for Super Dummies'. Interestingly, she then talked online to people through ICQ to learn about her new computer and the Internet, which she said was so much more useful than any

manual. When asked what other ICT support and services she had access to, she mentioned that her step-son had just completed a Certificate in ICT.

The general theme is that, as expected, small business owners and managers tend to turn to informal networks (such as family members or friends) for assistance as well as teach themselves. Most specialised software packages such as MYOB have useful call centres these days that can provide step-by-step instructions.

The small businesses were also specifically asked if they were interested in engaging with universities or local council. There was some interest (five businesses overall, four in Casey) in taking short courses if they were available, across a range of skill areas (business and ICT).

What links exist between Small Businesses and CBOs?
Businesses were asked if they interacted with, used, or dealt with CBOs. In all cases this there was no *online* interaction taking place between the two groups. This was surprising. The researchers believed that the types of small businesses which were chosen for interview would tend to relate to CBOs in some ways. At least one store owner said that when he was investigating options for learning to use new software, he went to the local council, hoping to be pointed towards a local CBO or teaching institution. Ironically a bow and arrow store owner did not mention any interactions with local archery clubs (there are two) – in fact they must form some of his customer base. An art and framing shop owner said he does not interact with any CBOs. However, that business is involved with the local community art group, so it is possible that the research question was not understood correctly. An issue may be that the businesses do not see a link between the elements of this study – technology, small businesses, and CBOs.

Collaborating with other Small Businesses in the area
One small business has attempted various different collaborations schemes with other local small businesses, but he has found that they are not willing or innovative enough to collaborate for mutual benefit. He is especially interested in promoting buying between stores and encouraging people in the area to spend their money in the local precinct. He gave the example of buying coffee vouchers from a nearby coffee shop - then he would be able to give these out to customers who needed to wait 10-15 minutes while he works on something. However, the coffee shop was not interested at all in this type of collaboration –he said they seemed bemused by the idea. He tried similar endeavours with other shops with no luck – indicating that the local stores have been there so long they do not want to change and are not innovative. This is perhaps not surprising because generally many small businesses are conservative (Burgess 2002) (a generalisation, of course, that does not apply to *all* small business).

Information and Content
The main use of the Internet amongst the businesses was to research products or what was occurring in their particular industry. National data indicate that 83% of Australian small businesses use the Internet for ‘research’ (ABS 2004). Hardly any businesses indicated that they had received any direct sales through the Internet (other than the two tourism enterprises – but in these cases it was customers from outside Wyndham and Casey whom they were interacting with). The highest number of enquiries received online via email was 8% by a bicycle shop owner.

The main benefit of the Internet came from indirect promotion online. For instance a health food store owner indicated that since her suppliers had listed her on their website as a distributor of their product she had seen a increase in sales. Also, she suggested that now customers research products online and then come into her store to purchase the products. Similarly two businesses that are in the motor mechanic industry stated that they do not directly advertise online, but they have set up affiliations with professional bodies such as Victorian Automobile Chamber of Commerce, and others, and that these groups advertise online for them. One of these businesses communicates online frequently with these groups - especially when they are looking for spare parts, specifications, or how to deal with rare issues. In the case of a panel beater in Casey, they were located amongst a strip of other mechanics and were able to use their strong informal networks to deal with issues such as spare parts, specifications.

The use of a website (although common) has not resulted in any great benefit for the businesses. It seemed that businesses are developing websites simply because it is the trend without any strategic objective. Even the website developer in Wyndham said that customers rarely visit the website first - usually customers call the small business and then the owner points them to the website for more information.

The Internet: Adopt or Not?

The Adopters

The small businesses that are using the Internet are those where technology has typically played a major role. For instance, the two tourism enterprises were using the Internet heavily and had about 40% of bookings online.

Also a photo developer store had seen some massive changes in the industry, not so much due to the Internet, but since the introduction of digital cameras. Digital cameras resulted in the store reducing from 3 stores (in Wyndham) to just the one store – the manager gave the example of how previously they would get 100+ physical films dropped off everyday, however now that number has dropped to about 30 to 40. He said they also had to lose staff, and had to close the other two stores to allocate money for the $AUD270,000 digital film processor. On the upside, this reduces the cost of film processing liquid and paper. Overall it has resulted in a transformation of the operation of the business.

Two enterprises stated that they were under considerable pressure from their franchise to use the Internet further or begin to use it, in order primarily to suit the needs of the franchise group which they belonged too In one case the owner who did not use the Internet directly[2] said that the franchise group had given her an ultimatum - use the Internet or be dropped from the franchise. She would rather continue to operate the way she does and for this reason said that she will get together with other members of the franchise to discuss and resist further Internet adoption.

A florist said that a group that she belongs to, 'E-Flowers' (not a franchise but an intermediary) are applying considerable pressure on her to integrate the Internet more and more into her business. The owner was not so keen on this idea, mainly because of the cost involved. Currently, E-Flowers will fax her a job (flowers that need to be sent from A to B) - however E-Flowers are pushing for this to be done online to reduce costs.

A website development small business indicated that it would have to look outside of Wyndham for customers. One of the business operators said that there just is not a market in Wyndham for website development for small businesses.

A wines store manager had taken the time to create a Wine Mailing List (customers could sign up in the store and then be emailed information on deals, new wines and so forth). He said however that he had received no interest from the emails that he sent out and that he was considering discontinuing the Mailing List.

An art and frame store manager recently purchased broadband for the business (he has taken 'it'out of its box, and is unsure about how to set it up). The purpose of the broadband connection is to allow customers to email in their digital photos, then the photos can be digitally enhanced, 'blown up,' and duplicated. This is a new idea from the manager - he is not sure if it will work, but he is confident. He will start to advertise it in store and on the website.

So in the case of these businesses the Internet is being used either because the business is being forced to, or because new potential is seen for the operation in addition to the 'expected' uses. The specific industry of the business appears to have a great deal to do with changes in business processes or new activities.

The 'Non'-Adopters

There was some resistance to the use of the Internet. Two small businesses that really resisted the Internet were:

- The bow and arrow store: the owner despised the Internet. He indicated that it has caused many problems in his business. He said that now so-called '*smart*' customers use the Internet to buy cheap poor quality goods from China and when these products break they are brought into his store for repairs. Also, he said people use the Internet and find cheap prices and then ask him to beat that price – and this really frustrated him. (The bicycle store owner also made the same comment – that customers now try to bypass the traditional store and purchase online). He said that he hates the use of email and he has a website (built by his son) that he does not advertise. He continued to say

[2] An interesting contradiction emerged when we approached this lady for an interview. She said "*I don't use the Internet*". Later we found however, that her customers have increased since her product suppliers began to list her business as a distributor of their products. Also, she said customers come in after performing research on products and want to buy them or ask questions.

that the problem is how the Internet is going. He said: "*it comes down to the attitude of the people*" (the customers)… "*the extension of the Internet means the death of retail, specialized business don't/won't exist*". Our researchers were 'lucky' enough to be in his store when a customer asked him to beat an online price – the response was not nice! He said that "*young people*" or "*Internet nerds*" that buy online very cheap products and then bring them in for repair. He said: "*these people think they have done research but know very little*".

- The art and frame store owner said he would never use the Internet – *"why should I?"* He suggested that he does not believe he is missing out on anything. When people send him an email, he said he calls a friend who reads the contents of the email to him. This is important because it highlights that, even though he tries to avoid the Internet, people in that industry are moving on and he is being left behind. He also said, *"I have the best computer in the world, my brain and my arms, and when the system goes down my computer keeps working"*.

Both these enterprises had been around for over ten years and seemed very set in their ways – both owners were around or over 50 years old.

Discussion and Conclusion

Although the sample of micro- and home-based businesses which were interviewed could not be considered as being representative of all, this study provides a varied sample as a scoping study with tentative findings worthy of further investigation.

The initial observation is that it appears that the LIAISE standards offer a useful framework for classifying the results of such studies. There are still *infrastructure* issues for some small businesses when attempting to connect to the Internet, that do affect the other areas of the framework. Whilst many of the businesses chose to be 'self-taught' in relation to developing their technology skills, many of the business owners did rely on informal networks when building capacity for ICTs (which was not unexpected), although there was little evidence of the use of ICTs for forming or cultivating formal, ongoing networks. There seemed to be limited awareness of the usefulness of universities and CBOs for capacity building.

With a degree of alarm, the micro-businesses rush to try to help themselves to learn information technologies, or turn to close friends and family for support, often with very limited success. For their part, the universities reveal that a few steady relationships with micro-businesses and CBOs have occurred haphazardly, in general in the absence of model precedents and continuous resourcing to promote better outreach. Frameworks are lacking, and require more detailed investigation. Micro-businesses find it hard to identify any means by which they believe they can be helped. A void of knowledge-sharing or co-ordination of available services is identified. Some interviewees call for local government to assume the role of fostering and co-ordinating better relationships between micro-businesses, community-based organisations and universities. The viability of this option (and others) inspires further exploration.

In relation to uses of the Internet, the primary benefit of websites was for online promotion, and the Internet generally was used for business research. Not surprisingly (again, referring back to the literature) there was little evidence of strategic planning for website development.

Some interesting results were revealed when businesses were queried about their adoption or non-adoption of the Internet. Some of the businesses that had adopted the Internet were forced or coerced to do so by partners, and some that had adopted websites were looking for innovative uses of the technology. At the same time, there some business owners who were obviously unsure of the benefits that the Internet could offer and were set against its use.

Overall, the study supported the existence of many of the 'barriers' to effective use of ICTs which had been earlier highlighted in the literature, and as indicated even in this early stage of this study, there is plenty of scope for the development and effective use (Gurstein 2003) of the Internet by micro- and home-based businesses, at least in the Wyndham and Casey areas.

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