

# Collaboration between higher education and the Economic Development Board: Using service learning to provide e-business support for regional small businesses

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## Abstract

This article describes the outcomes of collaborative research between the Business and Regional Enterprise Unit of the University of South Australia's (UniSA's) Centre for Regional Engagement (CRE) and the Whyalla Economic Development Board (WEDB) conducted with small businesses operating within the regional city of Whyalla. The findings of this research indicated that there was a need to raise awareness of the advantages of using the Internet. Many businesses in the retail and services sector did not appreciate the benefits of using the Internet and e-commerce and required practical assistance in this area. In response, students from UniSA's School of Computer and Information Science are assisting regional firms through service learning projects that provide guidance in the design, implementation and maintenance of a Web presence. Partnering with the WEDB, the University is working to develop technically aware regional small businesses that are able to compete in a global marketplace.

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## Introduction

The Internet offers opportunities for electronic communication and trading in the global marketplace and as such it can provide substantial benefits to a business. However, while access to the Internet is relatively inexpensive and readily available, smaller enterprises have been slow in using the Internet for electronic commerce (Pease & Rowe, 2003). The results of previous studies that investigated the use of the Internet in small and medium-sized enterprises (SMEs) in regional Australia (Blackburn & Athayde, 2000; Darch & Lucas, 2002; Fillis, Johannson, & Wagner, 2004; Hearn et al., 2004; Lawson et al., 2003; Pease & Rowe, 2003; Ramsey et al., 2003) found that these businesses do not use the Internet to its full capacity due to a lack of awareness of the advantages and uses of the Internet; lack of time and IT expertise of managers and staff; technology "phobia" amongst proprietors; concern about security and privacy; and a lack of readily available advice. Hence, there was an identified need for the provision of information on the

business benefits of the Internet and for practical assistance in the design, implementation and maintenance of a Web presence (Brown, 2002).

This article describes the results of collaborative research undertaken by the University of South Australia's (UniSA's) Centre for Regional Engagement (CRE) and the Whyalla Economic Development Board (WEDB) to investigate the current use of the Internet for online trading by small businesses in the Whyalla region with the ultimate purpose of developing technologically aware and capable local businesses and, therefore, increasing their sustainability.

## Background

Whyalla is an industrial city, located on the Upper Spencer Gulf in South Australia, with a population of approximately 25 000 people. Small businesses in the city are currently facing both threats and opportunities as a result of growth in the mining sector in South Australia. The Whyalla campus of the CRE is the only regional university campus in South Australia. It seeks to be responsive to its community and through its engagement activities contribute to the learning and capacity building of individuals and groups within the region (Penman & Ellis, 2003, p. 1). The WEDB was a government-funded organisation established in 1980 with the aim of “strengthening the economic base of Whyalla,” “facilitating business growth” and “fostering an enterprise culture by assisting small and medium businesses to prosper and expand” (WEDB, 2009, 2006, pp. 4–5). This body has recently been superseded by the new Regional Development Boards. Key objectives of the WEDB were to support the creation and implementation of programs and projects that facilitate employment, and economic and community development for the region of Whyalla. In turn the CRE has a commitment “to contribute to economic, environmental and social development in collaboration with local councils and community groups, government agencies and industry” (University of South Australia, 2002, p. 2).

Capacity building is a crucial component of community development, as it has the potential to transform communities according to Penman and Ellis (2003). In an article on community engagement between the CRE and the community of Whyalla, Penman and Ellis (p. 8) refer to “mutualism” in regional university-community links. They quote from a Community Business Partnership manifesto, which refers to a university and its community as “subsets of each other” which are “inextricably part of each other” (p. 8). Penman and Ellis argue that mutually beneficial collaboration between university and community can “provide more efficient and long-term solutions to community issues and build greater social cohesion.”

Small businesses often face substantial risks in relation to their computer-based information systems (Igbaria et al., 1999; Lee & Runge, 2001). De Castro (1999) identified a lack of critical mass; lack of awareness of the advantages to be gained; lack of financial resources; and lack of standardisation of procedures, equipment and software as problem areas. SMEs usually lack computer knowledge, cannot afford to employ internal staff with specialised computer expertise, and need to rely on outside resources. In addition, SME owner/managers often lack the “strategic mindset” that regards changes in the business environment as a source of potential advantage, rather than as an additional burden on the firm (Condon, 2004, p. 57).

The Australian Electronic Business Network (1998) recognises that SMEs should be assisted to establish a web presence for information exchange and marketing purposes, and to implement e-commerce where it would enhance the business. Further, the Small Enterprise Telecommunications Centre (SETEL) suggests that “simplification” and “demystification” are required to allay fears and remove impediments to the use of the Internet and e-commerce, and that in communicating the virtues of the Internet, the focus needs to be placed on the benefits to the business rather than the benefits of technology itself (Brown, 2002, p. 18).

## **The research and its outcomes**

The research undertaken in 2008 involved qualitative investigation based on structured face-to-face interviews. The interview participants were the owner/managers of small businesses operating in the retail and services sector within Whyalla as this cohort had been identified by the WEDB as a group needing assistance. Interviews were chosen because they provide rich and comprehensive data and enable the interviewer to repeat questions, explain their meanings, and press for more information if a response is incomplete (Burns, 2000; Sweeney, 2007). The owner/manager was chosen to access the potentially strongest influence within the firm. In small businesses, ownership and management are usually not separated and control remains in the hands of the owners, which enables them to make choices about the allocation of resources. Hence, the attention given to and acceptance of a specific issue depends on the attitudes of the owner/manager (Sweeney, 2007); given that the owner/manager is usually the key decision-maker, managerial attitudes are important to the adoption of technology in a small business (Martin & Matlay, 2003; Spence & Rutherford, 2001; Sweeney, 2007).

The study aimed to investigate the use of the Internet in these businesses to increase market share and expand their operations and whether they used the Internet to buy, market and sell their products and services, with a view to determining how their e-commerce capability could be increased through active collaboration between the WEDB and the local university. The questions asked were:

1. Does your business buy and sell online (via the Internet?) If not, have you ever considered adding this capability to your business?
2. Do you regard the online sales by other Internet-enabled businesses (e-commerce) as a threat to the sustainability of your business?

Thirty suitable small businesses were identified from the WEDB database and a written invitation to participate in the research was sent to them. The criterion of firms with fewer than 20 employees was used to select the participants. This aligns with the Australian Bureau of Statistic’s quantitative definition of a small non-manufacturing enterprise (Meredith, 1994). Eighteen of the small business owner/managers expressed a willingness to participate (giving a response rate of 60%). During the interviews, notes were taken and the discussion audio-recorded. Recording the interviews allowed the researchers to participate in the discussions as well as taking notes. The interviews were transcribed and reviewed. The interview transcriptions were then summarised using the software NVivo8. It is acknowledged that the use of opportunity sampling, the small sample size, and subjective nature of data collected in qualitative research limit the degree to which the results can be generalised.

The majority of the owner/managers interviewed were aged over 45 years (78%, n=14), had been operating their business for more than 20 years (39%, n=7), and employed between one and five people (67%, n=12). The older age of the owner/managers and the extended length of time they had been operating their business is noteworthy as these may be factors contributing to the attitudes of the owner/managers and the “technology phobia” identified by Pease and Rowe (2003) as limiting the adoption of e-commerce.

When asked whether they buy and sell online via the Internet as part of overcoming the challenges and risks involved in running their businesses, and whether they had considered adding this capability to their business, it was found that 28% (n=5) of the owner/managers used the Internet to both buy and sell their products; 33% (n=6) used the Internet to buy only; 6% (n=1) to sell only; and 33% (n=6) did not buy or sell via the Internet.

The study revealed that the majority of businesses did not have a Web presence, either because their products were not suited to selling online, or due to a lack of time and/or knowledge. Those businesses that had an online presence mostly bought and advertised online. Only one business sold its products online. The comment was made that the customers in the Whyalla marketplace were not likely to be “connected” and, therefore, able to buy online anyway. However, several businesses were currently creating an online presence with the aim of selling online. Some of the businesses had maintained a website in the past, but had not continued with it due to the cost and time involved in keeping it updated.

Only three owner/managers (17%) believed the online sales of other Internet-enabled businesses were a threat to the sustainability of their business. This low figure confirmed the concerns of the WEDB. One discussed overseas sites, highlighting that “it’s cheaper to buy a lot of the product from America than in Australia.” A large proportion of the business owner/managers however, considered that the type of product they dealt with and the face-to-face service they were able to provide resulted in competition from online trading being no threat to their survival. Many emphasised the need for personalised service in relation to their product, because they operated in a “touch it, feel it, sort of industry.”

In accordance with the research by Blackburn and Athayde (2000), it was found that most of the businesses used the Internet for communications via email and searching to gain product information before purchasing. Few were involved in transaction processing. However, over a third (35%) of the owner/managers said that they would like to establish a website for their business. Many indicated that they did not have the necessary skills to create a Web page or set up an e-commerce site and would need assistance. The challenge, therefore, was to create awareness and interest among the owner/managers who did not have a Web presence and get them to use and evaluate e-commerce. This is where the university and WEDB could play an important role in supporting small businesses in its region.

## **Support via service learning**

The University of South Australia’s positional statement is “Educating professionals, creating and applying knowledge, engaging our communities” (UniSA, 2007, p. ). On its website UniSA includes service learning as part of its Teaching and Learning strategy as the university believes that

the benefits of an individual's education in civilised societies are not simply those of self-interest, but admit an element of mutuality; a recognition that the societal support of higher education for some carries an expectation that the community as a whole will benefit. (UniSA, 2008, p. )

Service learning is an application of practice-based learning. Specifically, it is an educational philosophy that promotes active learning through community service. Students learn by actively working on a project in the community, thereby contributing to meeting the needs of society. It requires a relationship based on mutuality – the student and the community both benefit. For the students: it builds their résumé; builds their self-confidence; provides valuable lessons in citizenship by exposing them to societal issues they might never have encountered; and links them to the community outside the university in a way that benefits all stakeholders (Sanderson & Vollmer, 2000). Hence, the task of assisting regional small businesses with developing a Web presence was an appropriate project to be undertaken by students of the university's metropolitan-based School of Computer and Information Science (CIS). This six-month project contributed one 4.5 unit module towards completion of their undergraduate Information Technology degree.

Two clients were selected for the service learning projects, namely (i) a boutique that sells women's clothing and accessories to clients of all ages, mainly based in Whyalla and the rest of South Australia and (ii) a scuba diving business that provides services in two distinct areas, namely recreational and commercial diving. Whyalla is the only place in the world where cuttlefish are known to congregate in large numbers to perform a mating ritual and the recreational diving is focused around this unique phenomenon. This includes diving training and certification, excursions, information sessions and boat charters. The commercial diving activities include underwater work such as welding, cutting, repair work and fish farming. The businesses were selected based on their willingness to take part in the program and the owner/managers' wish to enhance their businesses through a professional Web presence.

Small businesses such as these usually approach a Web-design and development firm to design and maintain their websites, which could be very costly. In this case the work was done by two Information Technology (IT) students of the School of CIS at UniSA. The projects involved the design and implementation of an online payment system that is linked to the existing website of the boutique and a brand new Web presence for the diving business. Both business owners also indicated that they would prefer to update and maintain their own websites to keep them current, rather than relying on an outside party. Further, the client requirements were that the students never assumed that the person reading the manual had prior knowledge (keeping the language simple and that all steps are clear), give opportunity for techno-savvy people to be more creative, explain the 'why' in many processes and enable the backup of data and maintenance of the equipment.

The projects required the students to work closely with the small business owners/managers to gather information on their business models, the different products and services, the image of the business, the required functionality of the website, et cetera. In order to address important maintenance issues, the students remained in close contact with the owners for two months after installation to support them with the initial management of their Web presence. Training in the maintenance of the website was an important part of the process so that the

owner/managers were able to be self-sufficient after the design and implementation of the website had been completed.

Assessment of student performance is a key part of a service learning program. The students' accomplishments were assessed on a number of activities such as discussing requirements, iterating through different prototypes, setting up the website, training personnel and preparation of documentation. The projects enabled the students to understand customer needs and appreciate potential barriers to the adoption of information technology in the region. The students were required to keep a personal reflection journal as part of the assessment of the Industry Project course. The entries in the reflection journal indicated that the students had a very positive experience. The comment was made that having two different clients from diverse business and diverse understanding of technology worked really well.

Two different solutions designed for two different types of clients worked and it proved that if we are able to smartly design the solution, business owners are eager to maintain it.

The reflection also indicated that the students learnt much more than IT skills in the process. They also enjoyed adding value to the community.

The clients were extremely pleased with the final product and each client found it really easy to update and maintain the website. The concept of service learning really worked. Our desire to do something for the community was achieved as we were able to successfully put the small businesses in regional areas on a global map. Although we will have to wait another 2 years to see the effect in terms of increase in sales, the thought that we empowered small businesses in regional areas to optimally use technology feels good.

As the business owner/managers were assisted to discover new ways of using the Internet to enhance their business, they were able to take ownership of the initiatives. Clients were requested to give feedback on their experience of the service learning project, although no formal assessment was done by the client. The business owner from the local boutique was especially pleased with the final product and found it easy to update and maintain the website. She commented that

small business operators are always time poor regardless of how efficient or successful they may be and to have students working with small business owners in the IT area is a great and valuable partnership.

## Conclusions

Small business owner/managers in regional areas face specific problems such as lack of technical knowledge, time constraints that limit the optimal use of technology, and lack of technical support. Research undertaken by the Whyalla campus of UniSA's CRE investigated the Internet usage of small businesses in the regional city of Whyalla to determine how their e-commerce capability could be enhanced to improve their sustainability in an increasingly competitive market place. In small firms most of the decision-making and control is in the hands of the owner/manager. Therefore, the motivation of the owner/manager is an important factor in the use of e-commerce; it is necessary to understand the motivations of the owner/manager of the smaller firm in order to understand why some firms view technology as an opportunity for business development, while others perceive barriers to embracing such new technologies. It is acknowledged that while some businesses fit well with e-commerce, others sell a product or service not suitable

for sale through an online medium. However, even though some firms may provide products or services that are not suitable for selling on-line this does not mean that these services and products cannot be advertised via a Web presence.

The University of South Australia is committed to providing its students with not only a strong theoretical education, but also an off-campus experience. Service learning can provide a solution for the lack of technical skills and experience in regional areas and can provide students with a deeper understanding of their course content and how to apply it to the real world, while at the same time, enhancing the probability of success in regional small businesses. Regional Economic Boards can provide a central point for small businesses wishing to become involved in e-commerce. Service learning students can provide practical assistance and the implementation of a web presence. Relationships formed through projects such as the ones described in this article, have the potential to be mutually beneficial to all involved and it is planned to continue offering support to regional small businesses via similar service learning projects in the future.

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