Identifying the e-Skills Needed for the Effective Utilisation of Electronic Small Businesses Development Support Services

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Abstract

As a country South Africa faces numerous socio-economic challenges, for instance high levels of poverty and unemployment particularly among people in previously disadvantaged areas (PDAs). In order to overcome these and other challenges the South African government identified small businesses as possible solutions. These businesses are considered to be 'engines of economic growth' and job creators. For this reason government and the civil society (Non Profit Organisations) started utilising the Information and Communication Technology (ICT) to provide various types of wider reaching electronic support (e-support) to them. However, in spite of the availability of this e-support, small businesses nationally, especially in previously disadvantages areas (PDAs), where they are needed most, are frequently failing. A number of studies into this failure suggest that *inter alia* the business owners, managers and employees are not using the provided e-support. This was found to be largely due to the insufficient ICT-related skills (e-skills). It was, thus, necessary to further investigate the influence of e-skills or lack thereof on the use of the support. The findings of this study support the premise that different levels of e-skills among the business owners and managers either promote or discourage the use of any sort of e-support. The study also highlighted other factors such as a lack of information and ICT access, which negatively influence the use of e-support. It is envisaged that the recommendations of this study will help small business, civil society organisations and government agencies to understand which e-skill are necessary if e-support that is coming from government or NPOs is to be effectively utilised.

Keywords: Government agencies, NPOs, Service Providers, Electronic Support (e-Support), Small Businesses, Electronic Skills (e-Skills), Information and Communication Technology (ICT), Previously disadvantaged Areas (PDAs)

Introduction

"*For every [South African] small business that closes …6-8 jobs are lost*". (Business Times, 13 January 2008)

The above statement appropriately illustrated the importance of the small business sector for South African (SA) economic development – particularly local economic development. The highest

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significance of small businesses prompted the SA government to initiate organised effort to support small businesses. These efforts arguably began after the 1994 independence when the new SA government introduced a white paper on national strategy for the development and promotion of small business in South Africa - Notice 213 of 1995. This national document acknowledged the importance of this sector and the commitment of government to the establishment of a number of supportive mechanisms.

The success of small businesses, especially those in the previously disadvantaged areas (PDAs), is considered essential since they are key contributors to the economy. These businesses are strategic tools that help government address social challenges the county faces. These challenges are predominantly more common in the countries PDA communities (Presidential National Commission on ISAD, 2013), with examples including unemployment, crime and poverty. High levels of poverty, in particular have been a problem for government since 1994 (Mensah & Benedict, 2010), affecting mostly people in PDAs of the country.

There is a strong need for more effective support for small businesses. These businesses have been found to have low success rates as a result of a number of factors, some of which are irredeemable (Mitrovic& Bytheway, 2009). The review of pertinent literature has shown a variety of potential sources of support for small business development: (i) Seeking support from other businesses (usually at cost), (ii) working with community-based NPOs (at very low or no costs) and (iii) help from government (Mitrovic & Bytheway, 2011). Much of this support is provided through information and communication technologies (ICT), notably through Internet which is referred to as "electronic support" (e-support).

The e-support is provided in order to encourage entrepreneurship and help struggling small businesses. It was found that an average of 60% to 80% of these businesses fail within the first 2 years of trading (Jacobs, 2010). The choice to make use of any type of ICT for business purposes in heavily influenced by the small business owners characteristics, technical expertise, willingness and attitude towards ICT (Harindranath, Dyerson & Barnes, 2008). As such, the study focused more on the e-skills levels of the business owners and less so on the employees because the owners are responsible for making the top level decisions about the use of ICT for business purposes. Additionally informal small businesses in PDA are survivalists, also known as sole proprietors, meaning they are run by one person – the small business owner.

Coupled with small businesses, ICT was identified as a key facilitator in overcoming social challenges that the country faces. Government or Non Profit Organisations (NPO) services, which were once offered offline, are now provided electronically and can be accessed anytime from anywhere (Demunter, 2006; Mitrovic & Klaas, 2012). Given the ease with which the Internet facilitates informational service delivery, governments have embraced it as a major tool for improving the economy and standards of living for all citizens. Government at all levels (local, regional and national) are using ICT to provide better e-support for small business development. The e-support includes Internet based information services and easy, as well as cost effective access to ICT resources such as computers with Internet access, printers and photocopiers and, increasingly, mobile technologies. Small businesses that cannot afford to own these resources can use the provided e-support resources for the development of their businesses.

Although NPOs can be useful in providing support to the community-based small businesses, it was found that these organisations mainly offer the same kind of services as the government agencies (Mitrovic& Bytheway, 2009). Therefore, this study concentrated on the e-support services provided by various government agencies in South Africa.

Problem Statement and Objectives

Despite the magnitude of e-support provided to small businesses in PDAs, these businesses are continuing to have high failure rates. Furthermore, the business owners are not utilising the available e-support effectively. A number of studies suggest that the reason for this lies in the lack of ICT (electronic) skills, frequently referred to as "e-skills", among the small business owners or employees (e.g., Ashrafi & Murtaza, 2008; McGrath, 2005; SEDA, 2009; Underwood & Jacobs, 2007; Wesso, 2010). Consequently, in order for any available e-support to be utilised fully, the intended beneficiaries (small businesses, in this case) need to possess the e-skills necessary for using these ICT-based services (McCormack, 2010).

As such, the objective of this study was to identify the e-skills needed for the effective utilisation of e-support by small businesses owners (and their employees) in PDAs of South Africa. In order to achieve this objective, the study set out to achieve the following:

- To obtain an overview of the business owners knowledge of e-support.

- To investigate and document the e-support available to small businesses in PDAs of Cape Town in particular.

- To explore the different local and international constructs of e-skills, so as to identify the specific e-skills that small business owners and employees need in order to utilise e-support effectively.

- To provide recommendations to government, their agencies and small businesses for the improved utilisation of e-support. Thus promoting local economic development through successful small businesses.

Approach to the Study and Basic Concepts

Anticipating which e-skills are needed, and when they will be needed, is not an easy task (Republic of South Africa: DHET, 2010). Careful planning and clear understanding of the context where the e-skills are needed is necessary to facilitate the process. As such, the first stage of this exploratory Case Study involved setting a clear scope for the investigation. The study was restricted to small business owners in PDAs (particularly Gugulethu, Khayelitsha and Langa) of Cape Town. These areas were selected because they constitute the largest PDAs in the Western Cape area, the empirical setting of this research. Focus was placed on government agencies that provide e-support intended to benefit small businesses in the particular areas of interest. These agencies provided e-support for free or at a very low cost. Moreover since most business owners principally informal business owners are living below the poverty line, this type of e-support is badly needed.

The selected government agencies included:

- National level: Small Enterprise Development Agency (SEDA),
- Provincial level: The Real Enterprise Development (RED) Door, and The Cape Gateway,
- Local level: The Smart Cape Project.

The next stage involved adopting working definitions of the key concepts of the study. This was done because concepts such as e-support and e-skills do not have commonly adopted definitions (Beyers & Koorbanally, 2010). Thus, for this study, the term e-support referred to support provided by government agencies through the Internet. This type of e-support related mainly to the provision of information regarding, for instance, various types of training, business registration, access to finance, lawyers and accountants among many other things. This e-support also includ-

ed free or low cost access to ICT based resources (computers, printers and other relevant technologies). The concept of e-skills related to the knowledge, skills and competences associated with the use of ICT (European e-skills forum, 2004). The proven ability to then apply skills, knowledge and attitudes to achieve observable results (e-CF, 2011) was referred to as e-competence.

After adopting working definitions of the key terms, the e-support provided by the selected agencies was documented and then categorised. This process involved taking information about the available e-support services directly off the service provider's websites. Additionally, the accuracy of the services was then confirmed by a representative from each of the agencies. These representatives were also able to provide additional information regarding available e-support services that were not listed on their websites. The complete list of documented e-support services contained over 55 different services offered to small businesses. Examples included access to information on how to create and manage an email account, links to financial resources, available lawyers and accountants, among many others. All the e-support services were then grouped into the following 5 categories: (i) Training services; (ii) potential and existing business support; (iii) online information resources; (iv) ICT infrastructural support; and (v) promotional small business development incentives.

The study included a review of pertinent literature that analysed different e-skills frameworks, models and taxonomies (local and international). The intention was to identify the specific e-skills (attitudes, knowledge and skills) that are needed to use a particular type of e-support provided. The most noteworthy documents were: The National e-Skills Plan of Action (NeSPA), The Skills Framework for the Information Age (SFIA), the e-Competence Framework (e-CF), the South African e-skills council model and Romani's (2009) e-competency model. After a comprehensive analysis of the various tools the most appropriate one that highlighted the most fitting e-skills was selected.

It was found that the e-competence model designed by Romani (2009) detailed the most appropriate set of e-skills, given the scope of the study. Romani identified 5 key competence areas, which were referred to as literacies: (i) e-Awareness; (ii) informational literacy; (iii) technological literacy; (iv) digital literacy; and (v) media literacy. Additionally, the e-competence model could be applied in scenarios where small business owners or employees had either no e-skills, very basic e-skills or advanced e-skills. The model supported a gradual growth process.

Each of the competences (literacy) is accompanied by a detailed explanation of the attributes that make up that competence. Thus, the e-skills (skills, attitudes and knowledge) needed to use specific e-support services were identifiable. It must be noted that although, Romani uses the term literacy to contextualise the e-competence areas, for the sake of this study these literacies are referred to as e-skills. This was primarily because e-competences are, by definition, made up of skills, attitudes and knowledge, which are all general subsets of e-skills (e-CF, 2011).

In order to obtain more detailed definitions of the e-skills identified by Romani (2009), the authors examined other available definitions. Based on the findings grounded in literature the model was adjusted and definitions enhanced. An additional e-skill "Basic literacy" was added. This was done in order to elaborate the detail and scope of the original model, thus tailoring it more to the needs of the small businesses. Moreover, the skills, knowledge and attitudes associated with basic literacy formed the foundation for the other five e-skills.

The final set of e-skills that were proposed included combined definitions from various authors namely, American Library Association, 2011, Bruce (2003), Catts (2010), Catts and Lau (2008), EAVI (2011), IBSA (2010), Livingstone (2004), McCormack (2010), Maharana and Mishra (2007), Romani (2009), Rosado and Be'lisle (2006), Tilvawala, Myers and Andrade (2009), as

well as UNESCO (Horton, 2008). The final list of proposed e-skills and their definitions included:

(i)   Basic literacy (foundation skills)

These skills were also referred to as foundation skills. They included the ability to read, write, count and communicate orally. Moreover, basic literacy related to the small business owners and employees thinking and problem solving skills. Their ability to determine, recognise, define and articulate the information needs of the business, also fell under basic literacy.

(ii)   e-Awareness

e-Awareness was directly related to being knowledgeable and possessing accurate information about ICT. This included knowledge of where to access a computer and/or the Internet. This awareness also involved knowing the contribution and benefits that can be achieved from using ICT. Additionally, e-awareness related to their knowledge of government agencies that provided e-support and details regarding the e-support services they provided to small businesses.

(iii) Technological literacy

These e-skills were mainly concerned with the confidence and practical ability to use ICT. Focus was placed on skills levels, technology use, and the motivation behind the use of computers and the Internet. Attention was also placed on where the business owners and/or employees got access to ICT and the effects of limited access as well as e-skills on the use of the provided e-support.

(iv)   Informational literacy

The attributes of informational literacy related to information, being able to find it either online, through search-engines, or offline. The associated e-skills included the ability to read with meaning, understand, and interpret information from various kinds of sources. Informational literate small business owners in particular, would need to possess other skills and competences associated with managing information, in order to gain knowledge.

(v)   Digital literacy

Digital literacy related to the attitudes, skills and knowledge required to use ICT at a more advanced level. At this stage, the small business owners would be able to make use of ICT, primarily computers, and the Internet to facilitate business transactions. Examples of these transactions include online banking, submitting applications for tenders and electronically communicating with customers, suppliers and other businesses.

(vi)   Media literacy

The associated e-skills related to the understanding of the legal implications of using or sharing information found online. Media literacy was also concerned with the understanding of the various media platforms that were sources of information (i.e radio, television, newspapers, pamphlets and the Internet). The business owners, as well as the employees, needed to know how to access the platforms and use them as tools.

The stage that followed the identification of the proposed e-skills was the correlation of the e-skills and e-support. This process included identifying exactly which e-skill was needed to use a particular e-support service. For instance, basic literacy and e-awareness skills were relevant in order to utilise any and all of the available e-support services. In order to get any sort of information the business owners needed to know it existed, where and how to find it, including being able to read and understand the content. Consequently each of the identified e-support services was then aligned with the e-skills associated with the use of that particular service. Based on the information collected during the correlation process, the next stage was to test the literature review findings (accurate relevance of the proposed e-skills) in the empirical setting of the study.

The sample for this Case Study constituted 16 purposively selected small businesses and 9 representatives from e-support providing agencies. Due to the nature of this study, the data were collected from the above mentioned participants in their natural setting, using face-to-face interviews. The data were then analysed using the qualitative content analysis technique, facilitated partially by the qualitative data analysis software tool, Nvivo 10.

Findings and Discussion

The findings of the study were twofold. Firstly, the relevance of the proposed e-skills among the small business owners and employees was confirmed. Secondly, challenges other than the lack of e-skills, that were faced by the business owners' in relation to their use of e-support were also identified. Each of the e-skills and associated findings are discussed separately. The findings are in some cases grouped according to whether the small business was formal or informal. Table 1 summarised the main attributes of the sample population.

Table 1: Summary of the sample population biographical data (source: Authors)

		SMALL BUSINESSES			
	Business Type	*Small business category*	*Number of years business has been operating*	*Formal or Informal*	*Location*
1.	Funeral Parlour Owner	Survivalist	4 Years	Informal	Khayelitsha
2.	Seamstress	Micro	6 Years	Informal	Khayelitsha
3.	Edu Care Centre	Micro	19 Years	Formal	Gugulethu
4.	Bread and Breakfast	Micro	20 Years	Informal	Khayelitsha
5.	Bread and Breakfast	Micro	3 Years	Informal	Khayelitsha
6.	Furniture Shop	Survivalist	8 Months	Informal	Gugulethu
7.	Fast Food Kitchen	Micro	5 Years	Informal	Gugulethu
8.	Hair Salon	Micro	3 Years	Informal	Khayelitsha
9.	Hair Salon	Micro	5 Years	Informal	Khayelitsha
10.	Hardware Shop	Micro	15 Years	Formal	Gugulethu
11.	Law Firm	Very Small	6 Years	Formal	Khayelitsha
12.	Mini Market	Micro	28 Years	Formal	Gugulethu
13.	Mini Market	Survivalist	8 Years	Informal	Khayelitsha
14.	Butchery and Restaurant	Very Small	2 Years	Formal	Gugulethu
15.	Computer Repairs Shop	Micro	3 Years	Formal	Langa
16.	Hair Salon	Micro	3 Months	Informal	Gugulethu
		SERVICE PROVIDERS			
	Agency Type	*Agency Name*	*Interviewee Position in Agency*		*Location*
1.	Public library e-centre	Smart Cape	Senior Librarian		Khayelitsha
2.	e-Innovation PGWC	Smart Cape, Cape Access	e-Gov Specialist		Cape Town CBD (Head Office)

3.	Small business support	The Business Place	Consultant	Cape Town CBD (Head Office)
4.	e-Gov for citizens PGWC	The Cape Gateway	Management: Provincial Web Portal and Associated Platforms	Cape Town CBD (Head Office)
5.	Public library e-centre	Smart Cape	Senior Librarian	Gugulethu
6.	Public library e-centre	Smart Cape	Senior Librarian	Khayelitsha
7.	e-Resource centre	Cape Access	Management: Cape Access	Cape Town CBD (Head Office)
8.	Internet cafe	Internet Café	Owner and Manager	Khayelitsha
9.	Public library e-centre	Smart Cape	Senior Librarian	Gugulethu

Main Findings Regarding the Relevance and Influence of the Proposed E-Skills

(i)   Basic literacy (foundation skills)

The findings supported the fact that the employees and owners of small businesses in PDAs needed to have basic literacy skills in order to use e-support. Out of 10 informal business owners only 1 was educated further than grade 10. These business owners were not very fluent in the command of the English language, their reading and writing skills were also limited. Thus although they were in dire need of any type of support, they could not access e-support in particular due to their limitations. Consequently the business owners that did not have basic e-skills avoided using ICT in general. In addition, they had negative attitudes towards computers and the Internet because they could not use them.

On the other hand 5 of the 6 formal business owners had tertiary qualifications, thus they possessed basic literacy skills, and they could read and understand the content on service providers' websites. Moreover, they had thinking and problem-solving skills, which allowed them to determine and recognise the information needs of their businesses. These business owners proved that having basic literacy skills put them in a better position to access and use e-support.

(ii) e-Awareness

In order for the e-support to have been accessed and utilised at any level the intended beneficiaries (owners and employees of small businesses) needed to know it existed. Furthermore, they needed to know about the existence of computers and the Internet as well, considering that e-support is provided mostly through these and other such technologies. It was found that out of the total 16 (formal and informal) small business owners 12 knew where to access a computer. Out of this group of 12 business owners, 4 had never used a computer before. These 4 were also truly uninformed about how to use a computer and/or the Internet, they only knew of them.

It was found that small business owners in particular, that were aware of the existence of computers and the Internet, including where and how to access them, were in a more advantageous position. These business owners were benefiting economically, socially and personally from the use of the provided e-support. In addition, they were more knowledgeable about how e-support could be used to find business support information and perform business-related tasks. However, some might not have had the technical e-skills needed to use the computers and Internet to perform these tasks themselves. In these cases they asked the ICT centre assistants or the person sitting next to them for help, or to access the computers on their behalf.

9 small business owners were not aware of any e-support services available, including how and where to access them. However, of the 7 business owners that were aware of the existence of government agencies that provide e-support, 2 had an official relationship with an agency, which provided them with information on available tenders and e-skills training.

(iii) Technological literacy

The findings regarding technological literacy revealed 3 main groups of e-skills levels among the business owners. The smallest group of business owners had advanced e-skills, followed by the group with basic e-skills and lastly, the largest group which had no e-skills at all. 8 business owners admitted they had no e-skills at all, they also acknowledged that they needed computer related training. This lack of e-skills was due to the lack of funds, limited education and exposure to ICT. These business owners also revealed that they often felt pressure from external forces such as, customers, suppliers and other businesses to use computers. It was also observed that business owners who lacked e-skills were demoralised and felt digitally excluded. This was primarily because they could not physically use computers and/or the Internet, even though they had a strong desire to do so.

Due to their limited education levels and exposure to technologies such as computers, it was found that informal small business owners made up the majority of business owners with either no e-skills or very basic e-skills. These business owners were also more comfortable using their cell-phones to access the Internet. They were too shy to go to public libraries to access the Internet because of their limited e-skills. They did not want their lack of e-skills to embarrass them. Furthermore, the informal small businesses were in most cases survivalist entrepreneurs as a result they could only afford to leave the business to go access a computer and/or Internet once or twice a month, which did not give them enough time to build any e-skills or benefit from utilising e-support services.

The reasons why small business owners whether formal or informal, accessed the Internet varied. The service providers revealed that firstly, small business owners mostly looked for business tenders and business support information. Secondly, they even looked for job vacancies and thirdly they often checked their marital status. This was as a result of the high identity theft rates in the communities. Another main reason for using the Internet was social networking, particularly Facebook and Skype, which were found to be the most popular.

Only 2 formal small business owners had advanced levels of e-skills. As a result they had the confidence and ability to use computers and the Internet. Furthermore, they could use these technologies to access and utilise e-support. They could also exploit various other technologies to perform business related tasks. These particular business owners used electronic resources such as word processing, spreadsheets, databases and other tools to process, design, store and manage their business related information.

(iv) Informational literacy

The responses given by the small business owners and service providers highlighted that the choice of which source of information to use was based on trust, convenience, cost and reliability. Thus although the Internet was the most trusted source, it was regarded as not being cost effective to access or reliable – government websites were said to usually have outdated information. Consequently since the business owners could not always access the Internet (which they preferred) for information they resorted to the print media especially newspapers as a means of receiving information. The preferred sources of information among the small business owners if access and cost were not factors are highlighted in Figure 1.
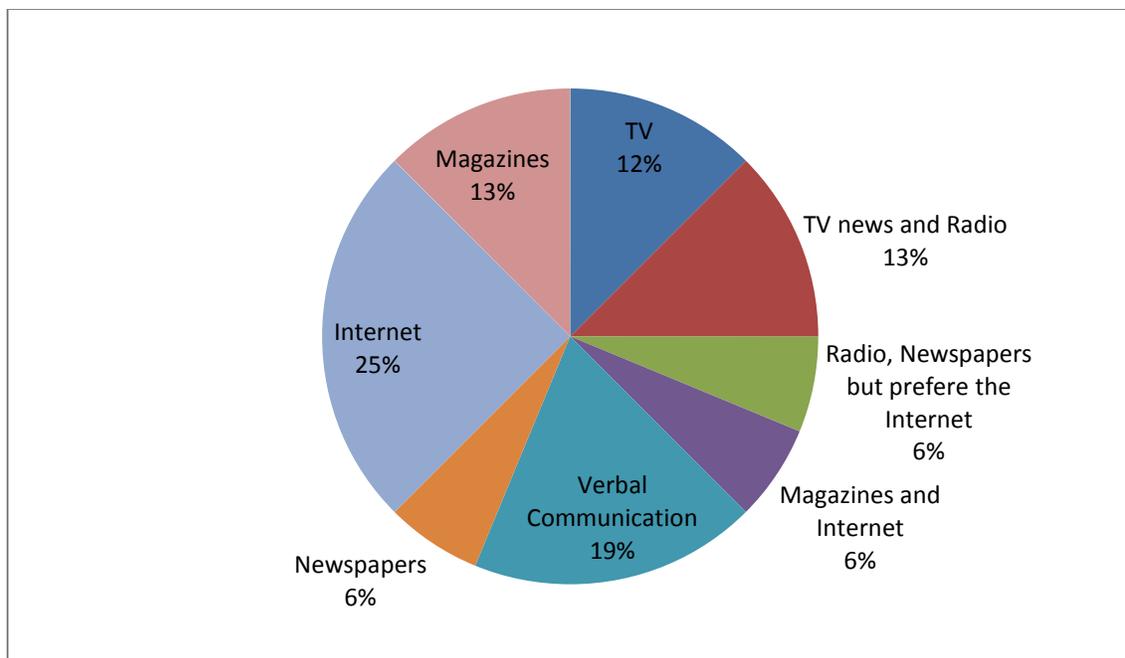
Figure 1: Small business owners in PDAs preferred sources of information *(source: Authors)*

The study also found that owners of small businesses, including their employees needed to have informational literacy skills. The business owners in particular that had these skills (coupled with previously mentioned e-skills) were independently able to use computers (and other capable devices such as cell-phones). They could use these technologies to look for and find information online or offline. Moreover, they were able to read, understand, judge, compare and interpret any business support information that was found electronically or from other different sources. It was also observed that owners of small businesses with these skills could generate and protect their own information. They could also use both manual and electronic mediums (e-mail, instant messaging and digital forums) to communicate and share the information.

(v) Digital literacy

It was observed that informal business owners were more sceptical and thus slower at taking up technology. In contrast, formal business owners were more dependent on technology to carry out day to day transactions. Only 5 of the total number of (formal and informal) business owners made use of the Internet either daily or on occasion for business purposes. Out of this group 2 formal business owners stated that without access to the Internet their businesses would collapse.

Furthermore, out of the fear of becoming digitally excluded 12 of the total number of business owners indicated a strong desire to either adopt technology into their businesses or upgrade. The technologies they wished to adopt or upgrade included, computers, laminating machines, photocopiers, printers, fax machines, ADSL modems, and computerised points of sale. They also wanted bigger computer servers, bar-code scanners, Closed-Circuit Television (CCTV), generators and control mechanisms for refrigerators. Figure 2 highlights findings regarding technology adoption among the formal and informal businesses. These findings relate to the owning of computers, use of the Internet for business purposes and having a business website.
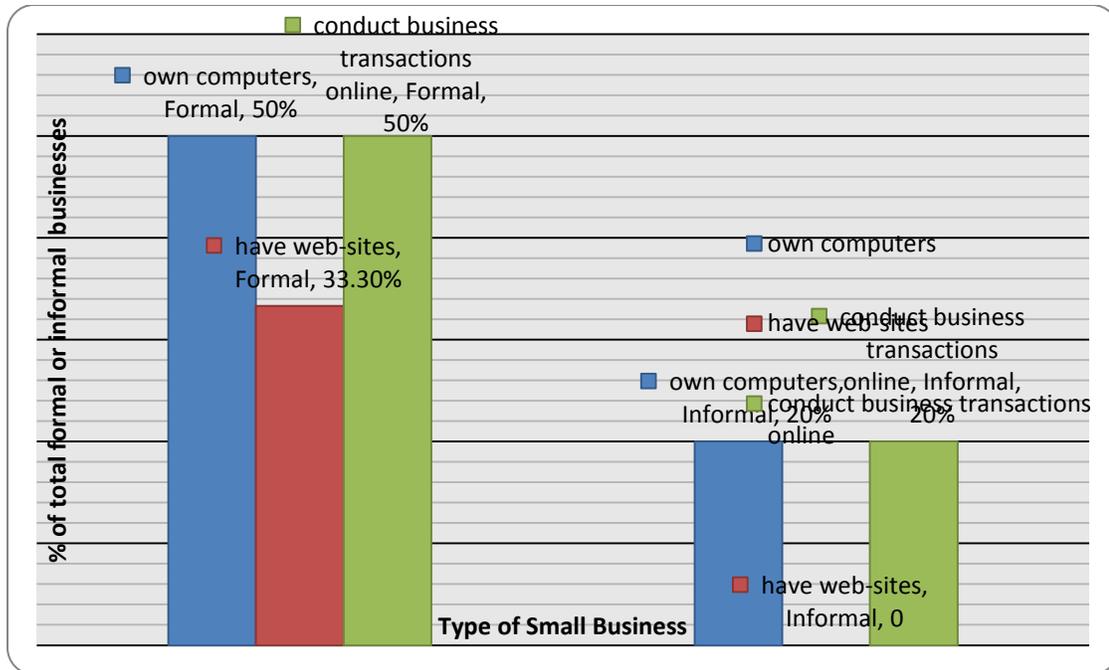
Figure 2: Technology adoption by small businesses in PDAs (source: Authors)

It was also noted that the owners of small businesses that had digital literacy skills were not only able to build new knowledge, but also strategically use ICT to facilitate business intelligence. They were capable of using ICT to simplify business transactions, such as organising information, online banking and communication (on multiple formats, either textual or multimedia). Thus, these skills enabled the small business owners to embrace the use of technology socially and for the benefit of their businesses.

(vi) Media Literacy

It was found, in addition to the skills mentioned above, that owners of small businesses also needed media literacy skills. The small business owners who were furnished with these skills understood how to access and use different media platforms (for instance, television, radio, print media and the Internet) to share, advertise, communicate and retrieve information. They also understood the legal implications of using different media platform to share or retrieve information.

The business owners that were not media literate were unfamiliar with any media platforms available to retrieve or share information, other than newspapers, TV and radio. These particular business owners still however lacked helpful information on how to go about it. 10 business owners might have been aware of the different media platforms but they were largely uninformed about any legal implications of sharing or using copyright material found electronically. Moreover, 6 business owners had never advertised their businesses. These business owners relied only on word of mouth because they were not media literate.

Barriers towards the Utilisation of E-Support

Further analysis of the data showed a number of challenges in addition to the lack of e-skills that are faced by small businesses, in regards to the use ICT to utilise e-support. Unless these challenges are addressed the utilisation of e-support by small businesses will still be minimal, even if the owners or employees possess the required e-skills.

(i) Unstable supply of electricity

The business owners stated that is was not possible to rely on technology, because at any time the electricity could be turned off. As a result they would not be able to access their information when they needed to. Consequently, the majority (13) small business owners preferred to keep and receive only printed copies of information.

(ii) High crime rates in PDAs

Due to high levels of crime some small business owners were hesitant to buy computers that they could use to access e-support. It would be too costly as they would also have to invest in security measures to protect their computers. While in other cases the business owners strongly believed that advertising their business would attract thieves to their premises, thus they preferred not to.

(iii) Pride, shyness, lack of patience and low self confidence

Agents that provided e-support declared that some small business owners, evident more with the older generation had too much pride to admit that they need assistance. This was found true especially in cases where the assistants were much younger in age. In other cases, business owners were shy, because they were not confident in their abilities, resulting in low levels of self-confidence and them avoiding using computers or other technologies altogether.

(iv) Perceived ease of use

The first form of interaction with a particular website plays a role in the manner in which a person feels about themselves and their abilities. First time users or users that are not so confident in their abilities, tend to get easily intimidated by complicated websites and processes.

(v) Lack of adequate resources to cater for demand

Even with the numerous initiatives put in place to provide e-support in terms of free access to computers and the Internet, there is still a great demand. Each of the libraries and community centres in the areas of interest had a range of 6 to 12 machines. In most cases, this was still not enough to cater for the demand, resulting in very slow up-take of computers. Additionally the computers were old and very slow, which also frustrated the users.

Recommendations for Government (Providers of E-Support) and Small Business Owners (Intended Beneficiaries of E-Support)

The main objective of the study was to identify the prerequisite e-skills needed to fully utilise e-support because without e-skills neither the small business owners nor their employees can utilise any available e-support services. There are four primary stakeholder categories involved in providing e-skills: (i) Business; (ii) government; (iii) education; and (iv) civil society/labour (Republic of South Africa. DoC, 2010).

Although there is heavy debate regarding the levels of responsibility, for each body (category), government is tasked with the heavier burden (Republic of South Africa DoC, 2010). Considering that the e-support is provided for the benefit of small businesses, the owners and employees are also significantly responsible for taking the initiative of e-skilling themselves. Table 2 highlights some recommendations for government and small business owners. These recommendations relate to how best to equip South Africans in general, small business owners in particular and their employees with the e-skills, information and ICT based resources needed to improve the use of e-support. The recommendations are based on findings grounded in literature (e.g, NeSPA), results

of the study, suggestions from the intended e-support beneficiaries (small business owners, as well as employees) and service providers.

Table 2: Government and small business owners' roles in providing and gaining e-skills
(source: Authors)

Stakeholder	Strategy/ Responsibilities
Government	• Strengthen partnerships between business, local government, communities and civil society. • Making use of cell-phone technology to communicate with business owners. • Forming partnerships with private sector/ NGO's in order to bring technology and e-skills to all citizens, including business owners and employees. • Implementing free Internet connectivity initiatives that cover large areas (For example the free Wi-Fi initiative in the town of Stellenbosch). • Increase access to educational funding. • Increase ICT literate teachers and trainers. • Ensure that all school-leavers are e-literate with sufficient foundational competence for further e-skills development. • Implement government service delivery strategies and plans on e-skills initiatives as integrated part of educational operations. • Tertiary institutions/ FETs should focus on skills that are in demand, align curriculum better to business needs. • Provision of free and accessible skills development, re-skilling and up-skilling initiatives through government workshops and training sessions. • Stabilise the supply of electricity in PDAs. • Increase the number of conveniently accessible ICT centers and service providers. • Enforce measures to curb high crime rates within PDAs.
Small business owners (and employees)	• Attend e-skills training initiatives. • The small business owners and employees need to learn the general school curriculums (reading, writing and counting). • They need to take the initiative to approach the government agencies that provide e-support in order to gain the knowledge or information they require. • Elect community leaders responsible for mediation with government, thus these leaders can collect information regarding any grievances and provide it and preferred solutions to government.

Conclusion

The overall findings of the study confirmed that there was indeed a lack of e-skills among the small business owners and employees in the areas of empirical research (PDAs). Hence, the development of e-skills identified by this study is a must for e-supported development of small business in the PDAs. Furthermore, there was a lack of accurate information regarding the exist-

ence of the e-support as well as limited, convenient and cost effective access to ICT based re-sources. The combination of these factors directly influenced the poor use of e-support by the intended beneficiaries. It is strongly believed that addressing the identified challenges will encourage the increased and successful use of e-support.

The contribution of the study is seen as fourfold. *Firstly*, the study identified the prerequisite e-skills needed to fully utilise e-support. *Secondly*, the study documented challenges (barriers) faced by small business owners in regards to technology adoption. *Thirdly*, the study provided recommendations to government and small business owners (and employees) on how best to gain e-skills and address the identified challenges. *Lastly*, the study provides suggestions for future research.
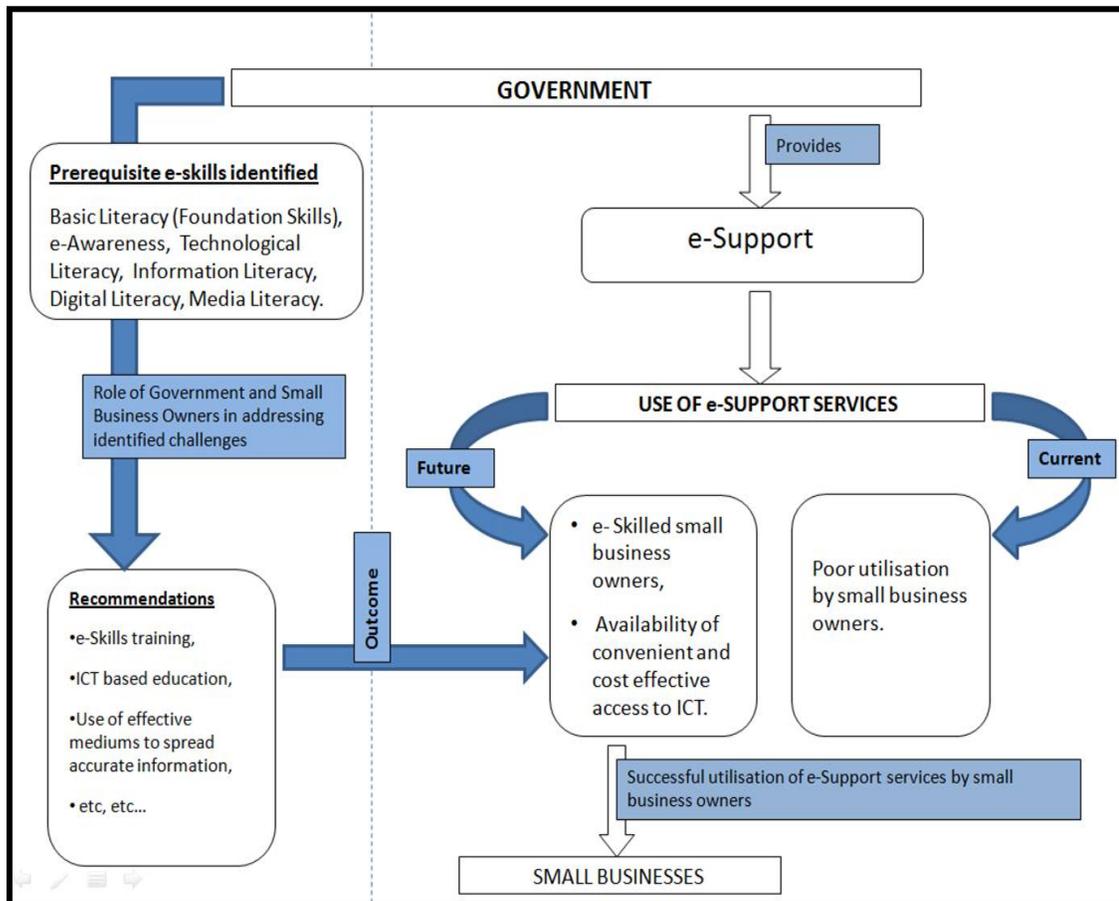

Figure 3: The use of e-support by small businesses and recommendations to government and small business owners that promote the increased use of e-support (Source: Authors)

Small businesses play a large role in the social and economic development (notably, poverty alleviation) of communities, especially those in PDAs. It is thus necessary to continue to provide the support that they require in order to ensure their continued success. Figure 3 highlights the current and desired positions in regards to the use of e-support by small business owners and employees. This figure also draws attention to the role of small business owners, as well as government in the provision of e-skilling initiatives, e-support and in addressing the challenges faced by small business.

Recommendations for Further Studies

It is noted that further research is needed in order to understand negative attitudes towards ICT, and how best to address such sensitive matters. The study did not cover all aspects that influence the adoption and utilisation of technology by small businesses in PDAs. It is necessary to investigate existence of other relevant e-skills factors (e.g. astute use of ICT and e-support services) in order to adequately address them. Furthermore technology is continuously advancing, becoming more evolved - thus, methods of providing e-support, including the actual services might change (e.g. mobile or cloud computing services). Hence, it is necessary to continuously test the relevance of here identified e-skills. These e-skills might need to be adjusted accordingly from time to time in order to cater for the changes in the ICT arena and government service provision.

References

American Library Association. (2011). *Information literacy competency standards for higher education, Definition of information literacy*. Retrieved November 10, 2011 from http://www.ala.org/acrl/standards/informationliteracycompetency

Ashrafi, R., & Murtaza, M. (2008). Use and Impact of ICT on SMEs in Oman. *Information System, 11*(3), 125-138.

Beyers, R. N., & Koorbanally, N. A. (2010). *Computer literacy : Insufficient for digital age literacy learners*. e-Skills summit 2010. Cape Town, 26-28 July 2010. pp. 1 – 10.

Bruce, C. (2003). *Seven faces of information literacy*. Retrieved August 15, 2011, from http://www.bestlibrary.org/digital/files/bruce.pdf

Catts, R. (2010). *UNESCO information literacy indicators: Validation report*. Retrieved September 7, 2010 from http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/information_literacy_indicators_validation_report_ralph_catts_en.pdf

Catts, R., & Lau, J. (2008). *Towards information literacy indicators*. UNESCO (United Nations Educational, Scientific and Cultural Organization). Information society division communication and information sector UNESCO. Retrieved September 7, 2011 from https://dspace.stir.ac.uk/handle/1893/2119

Demunter, C. (2006). How skilled are Europeans in using computers and the Internet? *Statistics in Focus, 17*. Eurost at: European communities. Retrieved September 6, 2011 from http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-NP-06-017/EN/KS-NP-06-017-EN.PDF

e-CF. (2011). *European e-Competence Framework 1.0: A common European framework for ICT professionals in all industry sectors*. European commission. Retrieved May 10, 2011 from http://www.ecompetences.eu

European Association for Viewers Interests (EAVI) for European commission. (2011). *Testing and refining criteria to assess media literacy levels in Europe final report*.

European e-Skills Forum. (2004). *e-Skills for Europe: Towards 2010 and beyond: Synthesis report*. Retrieved November 18, 2009 from http://ec.europa.eu/enterprise/sectors/ict/files/e-skills-forum-2004-09-fsr_en.pdf

Harindranath, G., Dyerson, R., & Barnes, D. (2008). National survey of SMEs' use of IT in four sectors. *Electronic Journal of Information Systems Evaluation, 12*(1). 39 - 50.

Horton, F. W. Jr. (2008). *Understanding information literacy: A Primer*. United Nations Educational, Scientific and Cultural Organization (UNESCO)Retrieved June 7, 2011 from http://unesdoc.unesco.org/images/0015/001570/157020e.pdf

Innovation and Business Skills Australia (IBSA). (2010). *Identifying digital literacy skills*. Retrieved September 8, 2011 from http://www.ibsa.org.au

Jacobs, N. (2010). *63% of small businesses fai*l. Retrieved March 13, 2011 from
http://www.fin24.com/Entrepreneurs/63-of-small-businesses-fail-20101111

Livingstone, S. (2004). Media literacy and the challenge of new information and communication technolo-
gies. *The Communication Review, 7*, 3-14.

Maharana, B., & Mishra, B. (2007). A survey of digital information literacy of faculty at Sambalpur Uni-
versity. *Library Philosophy and Practice,* Paper 144. Retrieved October 4, 2011 from
http://digitalcommons.unl.edu/libphilprac/144

McCormack, A. (2010). *The e-skills manifesto. A call to arms*. Retrieved October 4, 2010 from
http://files.eun.org/eskillsweek/manifesto/e-skills_manifesto.pdf

McGrath, S. (2005). Skills for productive citizenship for all. The place of skills development for micro and
small enterprises in South Africa. *Journal of Education and Work, 18*(1), 111 - 125.

Mensah, S. N., & Benedict, E. (2010). Entrepreneurship training and poverty alleviation, empowering the
poor in the Eastern Free State of South Africa. *African Journal of Economic and Management Studies,
1*(2), 138-163.

Mitrovic, Z., & Bytheway, A. (2009). Awareness of e-government related small business development ser-
vices in Cape Town. *The Electronic Journal of Information Systems in Developing Countries, 39*(4), 1-
14.

Mitrovic, Z., & Bytheway, A. (2011). Advocacy in e-Government related small business development ser-
vices in Cape Town. *The African Journal of Information and Communication, 11*, 39 - 54.

Mitrovic, Z., & Klaas, N. (2012). The perceived benefits of introducing m-government services in the
Western Cape. Proceedings of *ZA-WWW, 2012 Conference*.

Parliament of the Republic Of South Africa. (1995). *White Paper on national strategy for the development
and promotion of small business in South Africa*. Notice 213 of 1995. Cape Town, March 20th 1995.
White Paper for the Department of Trade and Industry.

Presidential National Commission on Information Society and Development (PNC on ISAD). (2013).
SMMEs and information communication technologies (ICTs). Retrieved October 26, 2013 from
http://www.pnc.gov.za/index.php/smmes

Republic of South Africa. Department of Communication (DoC). (2010). *National e-Skills Plan of Action
(NeSPA)*. Compiled by The Information Society Institute (TISI). pp. 1 - 199.

Republic of South Africa. Department of Higher Education and Training (DHET). (2010). *Framework for
the national skills development strategy 2011/12 - 2015/16*. First draft for consultation. 29 April 2010.

Romani, J. C. C. (2009). *21 century literacies and OECD* (Work Team E-40: Digital Skills at Workplace).
Retrieved May 1, 2011, from http://isaleh.uct.ac.za/Assets/PDFs/2010/21st_century_literacies.pdf

Rosado, E., & Be`lisle, C. (2006). *Analysing digital literacy frameworks. A European framework for digital
literacy* (elearning Programme 2005 - 2006). Retrieved September 8, 2011, from http://hal.archives-
ouvertes.fr/docs/00/13/77/79/PDF/Analysing-Edu-Frameworks.pdf

Small Enterprise Development Agency (SEDA). (2009). *Xhariep SMME development and support plan*.
Retrieved September 9, 2011, from
http://www.seda.org.za/Publications/Publications/Xhariep%20SMME%20Development%20and%20S
upport%20Plan.pdf

Tilvawala, K., Myers, M. D., & Andrade, A. D. (2009). Information literacy in Kenya. *Electronic Journal
of Information Systems in Developing Countries, 39*(1), pp. 1 - 11.

Underwood, P. G., & Jacobs, G. (2007). Supporting the information needs of small and micro businesses:
A South African case-study. *Proceedings of the World Library and Information Congress*, 73rd IFLA
general conference and council, pp.19 -23, August 2007. Durban, South Africa.

Wesso, H. (2010). Opening of the research colloquium and launch of ResNeS. Public address speech. e-Skills Summit 2010. Cape Town, 26 - 28 July 2010.

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