

## CHAPTER 7

### SUMMARY AND RECOMMENDATIONS

This chapter contains the conclusions of the research into the extent of the usability of the Internet in developing countries, as well as the recommendations that flow from the conclusions and data that emerged consideration of the research questions. The research questions are arranged under the two objectives of the study.

#### **7.1 To identifying and describe how existing technical and socio-economic conditions determine the usability of the Internet as an information resource in developing countries**

**7.1.1** What are the prevailing environmental conditions that encourage or discourage Internet connectivity?

The study has shown that the Internet is not yet a universally accessible resource in developing countries. The lists indicate disparities in access between sectors and social groups. Most countries lack the necessary policies and infrastructure that would enable widespread usage of the Internet. In spite of the fact that the necessary conditions for supporting Internet usage are not in place in most developing countries, development agencies continue to call for these countries to adopt universal access to the Internet as a means of stimulating development.

### **Recommendation**

It is recommended that the private sector, the government and civil society in each developing country should thoroughly investigate the role that the Internet plays in promoting development in their country. These three stakeholders should sponsor a needs analysis that will enable researchers to identify those sectors that could profitably use the Internet as a development tool. They should also devise and implement policies that would facilitate an environment that would support Internet use – provided they are convinced that the Internet can indeed be used as a means for achieving significant developmental gains (especially for previously disadvantaged sectors of society). Since the privileged sectors of society in developing countries already have access to the Internet and computer technology, the question of who will gain by making the Internet universally accessible is not relevant to the most privileged classes of people in developing countries. Donor communities should not impose

sustainable Internet usage. It should be driven by the most urgent identified needs of each developing country's population.

### 7.1.2 What is the extent of web connectivity in Botswana?

Private sector commercial operators in Botswana provide Internet service. Because Internet service providers are private businesses intent on making a profit from their investments, only those who are relatively wealthy (i.e. middle-class professionals, business people and other relatively privileged sectors of society) can afford the costs of being connected to an Internet service provider.

### **Recommendation**

The researcher recommends that civil society organizations collaborate with the government to offer Internet service provision at less than the prevailing market prices so that small enterprises will also be able to afford such services. Such a service would reduce costs – not only of basic connectivity for e-mail but also of web hosting. While hosting remains in private hands, the sizes of pages are inhibited by costs. Without such intervention, **the Internet will continue be a service for the elite and provide information for privileged while those who need information to improve their circumstances in life will not be able to obtain it (from the Internet at least).**

### 7.1.3 What measurable benefits accrue to communities that use the Internet?

This study has shown that there are very few objective studies that indicate that quantifiable benefits accrue to people using the Internet in most developing countries. The responses of the entrepreneurs in this study nevertheless have shown that the Internet has a potential to facilitate and increase the volume of trade of small-scale business enterprises if they can somehow be empowered to conduct e-commerce.

#### **Recommendation**

A thorough sector-by-sector need analysis needs to be conducted to establish what the needs of the various sectors are and whether the Internet can fulfil those needs. It is vitally important that the Internet does not become just another status symbol of the privilege classes. If the Internet is to be of any real benefit to developing countries, it must focus primarily on the needs and problems of the majority of populations (i.e. those who are traditionally deprived of education and opportunities for personal and community development).

This study has shown that small-scale entrepreneurs in the textile sector are potential users of the Internet. Such a group could therefore be selected as a target for intervention. These people would have to be comprehensively trained and educated before they could benefit from the advantages offered to them by the Internet.

#### 7.1.4 What policies support Internet usage in developing countries?

This study has shown that most developing countries do not have Internet policies to guide the provision of Internet services. No progress is possible in the absence of clear policies and the determined implementation of such policies.

#### **Recommendation**

Government should devise Internet policies in consultation with civil society. Such policies would take a multitude of factors and conditions into account. Such factors would include the deregulation of telecommunications, a reduction or abolition of import duties on computer hardware and software, and the guarantee of freedom of expression and speech on the Internet.

Another important factor is that small-scale entrepreneurs need to possess internationally valid credit cards in order to be able to trade both locally and internationally. Special arrangements would have to be made to provide such small-scale operators with appropriate credit cards. In addition, they would have to be educated in the use of such cards and in the necessary banking and commercial procedures that the successful use of credit cards presuppose. Either the government, or government in collaboration with banks, would have to provide the necessary guarantees before such credit cards could be made widely available for the purpose of on-line trade (e-commerce). The expansion of wealth and profit in previously disadvantaged sectors of community that would flow from proper exploitation of the

possibilities inherent in e-commerce would make all the risks inherent in such a venture well worth taking. But, as with all enterprises of this kind, an essential prerequisite for success would require a careful needs analysis, appropriate social and market research, pilot studies, and carefully devised policy frameworks.

#### 7.1.5 What are the policy issues around Internet connectivity and web availability in Botswana?

There is neither a government policy on Internet provision in Botswana nor any comprehensive information policy. The absence of national information policies in developing countries means that the government is not involved in Internet provision.

#### **Recommendation**

If the Internet is to be a tool in the development process, the Botswana government needs to devise relevant policies that take all the circumstances and conditions into account. An appropriate government policy would provide guidelines for the provision of Internet connectivity in the same way that policies about water and energy provision enable the government to provide these services and commodities to the population at large. Any such policy would guarantee freedom of expression. It would also delineate the various roles that the government and civil society would play, and it would define the extent and parameters of the anticipated service.

## **7.2 To establish the degree of usability of the WWW as an information conduit in Botswana and other developing countries**

### **7.2.1 What type of information do SMME entrepreneurs need?**

This research has shown that information needs are not static but that they keep evolving with time. In the case study process, entrepreneurs developed new information needs even as the study progressed. Their most urgent needs turned out to be information about e-commerce and empowerment to trade on the Internet (by, for example, obtaining internationally valid credit cards which none of them possessed).

### **Recommendation**

In order to keep up to date with the changing information needs of entrepreneurs, one needs regularly to examine and identify the information needs of the served population so that those needs can be captured and met. The information that is required to meet new information needs should be built into a website or information system that is used to meet the information needs of the target population.

### **7.2.2 What types of sources are currently being used to provide information?**

The study showed that the majority of the respondents depend on oral information obtained from their colleagues. Dependence on oral information is not in itself a limitation. Entrepreneurs have functioned for years by using just such methods.

However, the oral information system needs to be constantly refreshed with reliable and up-to-date information if entrepreneurs hope to be informed of latest developments and trends in commerce.

### **Recommendation**

Two interventions are recommended:

- (1) The infusion of current information into the oral system by means of radio. Internet radios could be one solution to this problem. Or else information gathered from the Internet could be re-formatted for radio broadcast to those populations who do not have access to the Internet.
- (2) The development of an electronic database that could be interrogated from touch screens that deliver audio responses. Such screens could be made available on the WWW or in “talk kiosks”. Building websites that utilize audio responses would complement and enrich an oral culture, as would providing information over a “talk kiosk”. Current and even complex information could be made available over the Internet in oral form. These “talk kiosks” could then be placed in or near places frequented by the target populations.

#### **7.2.3 Are the available sources adequate?**



Target population users indicated that the print and oral information that was provided for them through available information centres was not adequate and that it neither gave them a broad choice of markets for their products nor any useful information about sources of raw materials.

### **Recommendation**

I recommended above that either a web-based or electronic and audio database be used to meet the information needs of a population that satisfies its information needs by means of oral transmission. I further recommend that such a website and/or database be regularly updated. This is particularly necessary to support the needs of small-scale business concerns that may need daily updates if now to maintain a competitive advantage in the markets. Other information science-related values that define good information should also be factored into these databases – together with accuracy, reliability of information, clarity and suitability for the level of the target population. In addition to this, frequent needs analyses have to be performed if the content is to be kept relevant and adequate.

#### **7.2.4 To what extent are socio-cultural factors such as gender, language and education a limiting factor?**

The research has shown that women are the least educated and poorer members of society. It follows therefore that their knowledge of useful innovations and their

purchasing power tend to be limited. Knowledge of innovations tends to be a male domain in developing countries – as is purchasing power. The population under study in this research tended to be no exception. The only person in the group who possessed a computer was the only man in the group.

Although the education level of entrepreneurs was low, the languages of trade in the global market are major European languages such as English, French, Spanish and Portuguese.

### **Recommendation**

It is recommended that the socio-cultural barriers that inhibit access to innovations and resources be carefully identified in target populations before mechanisms are designed to meet information needs. Once they have been identified, such barriers should be eradicated or minimized so that access to information can be facilitated.

It is recommended that when information-providing mechanisms are designed for groups of entrepreneurs in developing countries, one of the most relevant local European trading languages be used so that utility of a mechanism is not limited to the locality in which the entrepreneurs live and work. Using a major European trading language enables entrepreneurs from the third world to compete in the world market. Designing websites in local languages (although desirable) automatically excludes those who use them from world markets. It is further recommended that information

centres provide interpreting services for both information that is uploaded and information that is downloaded.

Innovative means of providing information for illiterate populations will have to be devised because nearly everyone who uses the Internet is literate. Reformatting of information on the web for such population is recommended. Relevant sites could be downloaded and printed and then read to illiterate people or groups.

#### 7.2.5 What physical barriers limit access?

The study had shown that physical barriers that inhibit access include distance from urban centres where facilities are concentrated, a low rate of computer ownership, a low rate of telephone ownership, and expensive equipment.

### **Recommendation**

In the light of low rate of ownership of equipment and the prohibitive expense of connection fees, it is recommended that users with the same developmental needs should be grouped and be granted access as a group. Such access could be obtained through Telecenters, information centres or any other such facility that would enable groups of users to obtain as much access to the Internet as their activities and businesses required. Such centres should also be equipped with digitising equipment so that pictures of the kind of products and services produced or offered by entrepreneurs

could be uploaded onto the website. Group access of this kind could benefit both rural and urban populations.

It is recommended those who design websites for groups of users should first determine what kind of equipment will be used by the group in the service provision centre. The designer would then have to establish the special needs and limitations of the group in order to ensure that the Internet service provider's equipment will be able to support the design site.

#### 7.2.6. Are there are computerised databases that could provide current information?

The literature has indicated that there is a limited number of databases that contain business information in developing countries. The view is corroborated by the finding in the content analysis that the amount of electronically processed and formatted information about developing countries is very limited indeed. This case study revealed that one of the information providers was discovered to have made a database that contained the names and contact addresses of small business enterprises. The database was under construction and housed at the Ministry of Commerce of Botswana.

#### **Recommendation**

A thorough investigation would be needed to establish what other databases contain similar (or other useful) information in an appropriate electronic format. Researchers

would also need to ensure that information was not duplicated because duplication wastes scarce resources.

There is a need for databases that are not established and maintained only by commercial organisations. The need for the digitisation of local content was emphasised in the lists. Databases that provide relevant and current information should also be established in other sectors.

#### 7.2.6 What are the specifications of a good website?

A good site is one that meets the needs of a target audience and one that is responsive to the needs of its target audience in terms of accessibility, convenience, relevance and profitability.

#### **Recommendation**

It is recommended that a good site should never be regarded as a “completed” or one-off program. A good website should rather be constructed in such a way that it can be expanded, modified and adapted as the needs of the user community emerge, change, adapt and expand. This research showed that once one information need is met, another arises as individuals and the group as a whole rise to ever higher and more successful and satisfying modes of operation. If the website is to keep pace with the evolving needs of the group, it should be left conceptually (and literally) “open-ended” and constructed in such a way that it can accommodate add-ons, improvements and

refinements. It is essential therefore constantly to update the website on the basis of the expressed needs of the user community. It would also therefore be important for the website designer to ensure that the website host will be able to accommodate expansion in terms of both volume and capacity as well as increasingly sophisticated kinds of operation. (Thus, for example, if the entrepreneurs who were subject of this study could be accommodated with internationally valid credit cards and if they could be trained to engage successfully in e-commerce and on-line trading, it would be necessary to adapt the site to facilitate an ever-increasing volume of this kind of trade.)

#### 7.2.7 Did the researcher's website meet these needs?

This site was not designed to accommodate the evolving needs of entrepreneurs because when or how their needs would involve was a factor that is beyond the scope of this research. The website did however meet the expressed information needs of entrepreneurs. The exercise of researching and designing a website for entrepreneurs of the kind who selected for this research did however impress upon the researcher that an adequate website (in this context) is one that will always be able to respond to the evolving needs of its users.

#### **Recommendation**

A designer for populations in developing countries should be eager to identify the special needs, problems, difficulties and ambitions of his or her clients so that he or she can design the best possible website and services for his or her group. It is not the

designer's special expertise that should define the format, features and specifications of the site. All these factors should be determined by the needs of the target population. Sometimes the designer will have to educate the target group so that they become aware of how Internet technology can enrich, expand and refine their business operations. Many rural (and urban) people are unaware of how their quality of their lives and their incomes could be improved by skilful use of computer technologies such as the Internet and on-line trading.

It would therefore be responsibility of the designer to demystify the Internet and to make Internet use an enjoyable and profitable activity for small-scale entrepreneurs. *It is important for people to use the Internet as a profitable and life-enhancing tool and not to regarded merely as another "modern garget" that is beyond their reach.* The researcher recommends that designers go out of their way to include familiar features on the site. The site should never contain threatening or confusing graphics. It should be designed specifically to accommodate the needs and interests of the target population.

#### 7.2.8 How should the site be improved?

This site would have to grow and expand if it were to meet the evolving needs of its users. It was stated in paragraph 7.2.8 that a good site is one that grows to meet the evolving information needs.

## **Recommendation**

If the site is one that is frequently updated and expanded, the designer or maintainer will need to make frequent evaluations of the usefulness and accessibility of the site's features. He or she would also have to solicit the kind of information that could usefully be added to the site. The site should therefore be regularly updated. Constant needs analysis and user surveys will therefore have to be undertaken if the site is to remain relevant to the user community. The person who maintains the site will have to constantly monitor every aspect of the site and how the user community is using it. Thus the site would have to be adapted to accommodate e-commerce transactions if the entrepreneurs began to engage in local and international on-line trading. As the volume of on-line trading increased, the site would have to be once more adapted to accommodate an increased volume of sales (and the various banking transactions and services that would accompany such trading)

### **7.2.9 To what extent can the WWW be a tool for information delivery in Botswana?**

The role of WWW in development has been established beyond doubt by the literature. The case study and content analysis both demonstrate that the Internet has enormous potential as a tool for development. The extent of usage is hampered by both socio-economic and technical issues including the unavailability and/or unreliability of infrastructure, the absence of government policy frameworks, the lack of banking facilities and amenities (such as credit cards and various kinds of accounts and



services), and ignorance on the part of possible users about the enormously beneficial potential of WWW services.

### **Recommendation**

Those in authority in Botswana should have no doubts about how useful the WWW could be as an instrument for creating wealth, growth and expansion in the country. Instead of debating whether or not Internet connectivity should be promoted, the authority should make a serious effort to identify and eliminate those obstacles that stand in the way of allowing large numbers of (especially rural) people in Botswana to better themselves by gaining access to the benefits that Internet connectivity can confer. Botswana needs connection to the WWW – not simply because development agencies recommend it – but because it is one of the most important developmental tools in the modern world – especially for developing countries. It is now up to the government and the private sector to identify exactly how various groups of entrepreneurs and others in society could benefit from using the WWW before they make every possible effort to eliminate those obstacles that currently prevent people from making sustainable contact with the facilities that are made available through the WWW.

The researcher has demonstrated that the textile sector has a potential to trade extensively over the Internet. By advertising their products on the web, these entrepreneurs could expand their markets. In addition, they could also shop around for

cheaper sources of raw materials, and they could (in addition) use the Internet to download all kinds of helpful and relevant information. The researcher nevertheless made quite clear that groups such as these, need to be assisted in all kinds of ways if there are to become more profitable and so improve their standard of living and general well-being. Thus, for example, they need to have either free or subsidised access to the Internet and they need to be trained to use the Internet profitably. They also of course need the kind of facilities and amenities (credit cards, bank accounts and banking services) that will enable them to trade successfully and profitably on the Internet.

The researcher also recommends that research and other needs analyses be carried out to identify other sectors that could profit from the WWW as an information management resource.

### **7.3 CONCLUSION**

The study has shown that the Internet can be an extremely beneficial development tool in developing countries provided that certain problems are resolved and provided that the governments of developing countries demonstrate that they have the political will to remove the obstacles that currently stand in the way of widespread Internet connectivity. While it is all very well to call indiscriminately for adoption of Internet as a tool for development, the reality on the ground in developing countries is that there are a number of problems, hindrances and issues which have to be squarely faced and resolved before the Internet can be used successfully as a developmental tool in the

developing world. These problems, hindrances and issues have been described at some length by the researcher in the text above and relate mainly to the kind of infrastructure that is absolutely essential in any country before the Internet can function with maximum efficiency.

The study has also shown that Internet can be used by entrepreneurs in developing countries not only to access information but also to engage in e-commerce by buying and selling over the Internet. The researcher also showed that the Internet has a potential to provide current information to and facilitate communication among many sectors of the population other than the small-scale business sector. Any sustainable adoption and usage of the Internet would require a careful sector-by-sector needs analysis to determine the form and extent of each sector's needs for Internet connectivity. Finally, the researcher recommends **specific and situation-based Internet provision** rather than **indiscriminate wholesale national, large-scale provision**.

With this in mind, the researcher emphasises that needs analysis and market research needs to precede any kind of Internet provision. Providers, suppliers and designers should examine every aspect of each sector's needs – as well as each sector's readiness to use the Internet before facilitating access for that sector. If it is used in this way, the Internet will serve a specific function in a specific situation and therefore provide maximum benefit to particular group of people (rather than random benefits to diffuse and undefined population). The researcher's experience and conclusions in conducting

the study has led her to believe that situation-specific connectivity would be far more beneficial for developing countries than any kind of ill-prepared attempt to provide universal Internet connectivity in an economic and infrastructural context that could not support all sustain universal intimate connectivity. In other words, the researcher recommends that the Internet should be used as a precise and effective tool in any process that facilitates development – not merely as an end in itself.