Faculty of Humanities
Department of Media and Information

The information culture of the Maldives:

An exploratory study of information provision and access in a small island developing state

Aminath Riyaz

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Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

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Abstract

The thesis explores the relationship between information culture and development to highlight areas in information provision and access that need to be addressed in the small island developing state of the Maldives.

The study uses a mixed methods approach. A quantitative survey of a rural community and the urban community collected data on their information use, access, and awareness. Qualitative in-depth interviews with key information stakeholders in the country supplemented this, giving insightful information on how the relevant issues at hand were being addressed by the relevant government departments.

The results reveal that people in the urban capital of the Maldives have much better access to information sources than members of the rural community. The take-up of ICTs is promising and implementation of information services remains a high priority. The survey also found more frequent use of "formal" channels of information by the urban community while the rural community predominantly relies on "verbal" or "informal" information exchange. The identified challenges in the provision of information initiatives include the geographical dispersion of the country, lack of information awareness and information literacy, misalignment of information services with the needs, financial and human resources constraints, and the lack of appropriate information policies.

The major conclusions emanating from this study are that the difference in the communities in their information outlook is that of level of access, not in the actual usage, and that there is a strong oral culture of information exchange with a casual reading approach.

The results of this study will be useful to inform policy making in addressing the disparities between the rural and urban communities and in the general introduction of information services relevant to the Maldives.

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Abbreviations

ADB	Asian Development Bank
BDHRL	Bureau of Democracy, Human Rights, and Labor
ELIS	Everyday Life Information Seeking
GDP	Gross Domestic Product
IB	Information Behaviour
ICT	Information and Communication Technology
ICTs	Information and Communication Technologies
IS	Information Studies
IT	Information Technology
LDC	Least Developed Countries
LIS	Library and Information Studies
MCHE	Maldives College of Higher Education
MCST	Ministry of Communication Science and Technology
MLRIA	Ministry of Legal Reform, Information and Arts
MLRIA1	Interviewee 1 from MLRIA
MLRIA2	Interviewee 2 from MLRIA
MoIA	Ministry of Information and Arts
MPND	Ministry of Planning and National Development
NCIT	National Centre for Information Technology
NCIT1	Interviewee from NCIT
NCLHR	National Centre for Linguistic and Historical Research
NCLHR1	Interviewee from NCLHR
NCLIS	National Commission of Libraries and Information Science
NL	National Library
NL1	Interviewee 1 from NL
NL2	Interviewee 2 from NL
OIF	Organisation Internationale de la Francophonie
RCA	Reading and Cultural Activity
TAM	Telecommunications Authority of Maldives
TVM	Television Maldives
UNESCO	United Nations Educations, Scientific and Cultural Organisation
UNICEF	United Nations International Children's Emergency Fund
VoM	Voice of Maldives
WSIS	World Summit on the Information Society
WWW	World Wide Web

Chapter 1: Introduction

This thesis is an exploratory study on information access and use in the small island developing state of the Maldives and proposes investigation of the Maldives *information culture* to address the issues of access to and use of information. This chapter introduces the topic and presents the research questions and the specific objectives for the study. It also includes a brief introduction of the research methodology and outlines the significance of this research. The limitations and assumptions that were made in order to carry out the study are also identified. The final section provides an outline of the thesis.

1.1 Research questions and objectives

The aim of this study is to explore the relationship between information culture and development, and to highlight areas in information provision and access that need to be addressed in the Maldives. The research questions for this study therefore are:

(1) How effective are the existing and planned information initiatives in place in the Maldives? and

(2) What changes are required in the information culture of the country to lead to development?

The specific objectives of this study are to:

1. define and evaluate the present information culture of the Maldives;
2. investigate the relevant information initiatives in place;
3. investigate the relevant information initiatives planned;
4. identify the information needs of the people of the Maldives;
5. identify the challenges associated with the implementation of information services; and
6. draw up recommendations for the future direction of information initiatives.

1.2 Background to the research

The importance of 'information' in the development process is well documented, whether in an organisational context, in relation to business performance, or in terms of a country's economic development. Studies regarding the impact of information on development have been carried out as early as 1962 in the U.S. (Lester & Koehler, 2003), with a recent focus of similar studies aimed towards developing countries.

Koren (1997) asserts that human development can be directly linked to the development of a nation and that information is a basic right of everyone. Sharma (2005) declares that "human

development is a key ingredient in economic and poverty reduction" (p. 1) and that limited access to information and resources in developing countries, especially for the poor, is a vital factor hindering human development. It is believed that, to achieve the benefits of information, developing nations need to assess the information culture within the country (Raseroka, 2001).

1.2.1 Information culture

Information culture is often described within the framework of organisational behaviour and organisational culture (Oliver, 2004). In the field of information studies, information culture is most often linked to information literacy and information behaviour (Gendina, 2004). Since culture represents the attitudes and behaviour that are characteristic of a particular social group or organization (Leidner, 2003) for the purpose of this study information culture is defined as the attitudes, beliefs and behaviour towards information ownership and information use.

Based on the literature explored (see Chapter 2), information culture in a developing country context can be summarised as having a number of contributing elements to its enrichment and fulfilment. These include indigenous knowledge, information and communication technologies (ICTs), information literacy, research & publication, library and information services, mass media, and information policies. The literature also supports that libraries and information services play a pivotal role in bringing together all of these elements. Additionally, all of these information culture elements are shaped and influenced significantly by information policies in place, be it in freedom of information and copyright legislation, patenting, publishing standards or any other similar policies (Feather, 2004).

A study conducted by Zheng (2005) on information culture and development in China concludes that to truly step into the information society, developing countries need to adopt holistic approaches that are sensitized towards cultivating a modern information culture, and to make incremental social institutional changes alongside technological innovations.

Hence, it is the aim of this study to analyse the information culture of the Maldives in the hope of identifying changes required to lead into an information society.

1.2.2 The Study Setting

The Maldives is a small independent island state in the Indian Ocean and tourism and fishing are its main income-generating activities. The archipelago historically was inhabited by Buddhist people, but Islam was adopted in 1153 and has been the only religion practiced since then (Mohamed, 2006b). And in spite of having British protectorate status from 1887

to 1965, the Maldives lacks the "colonial imprint" as the British took no hand in the internal administration of the country (Maloney, 1976, p. 656).

While Dhivehi is the national language, and legal and official correspondences are conducted in Dhivehi, English is used as the primary medium for teaching throughout the educational system. The country boasts a literacy level, in the local language, of 98% for both males and females (Ministry of Planning and National Development (MPND), 2005).

The country faces considerable challenges in the provision of equitable services and opportunities to its population of about 300,000, due to the dispersed nature of its geographical layout[1]. Of the total population, 34.7% live on *Malé*, the capital island. Most public services, such as schools and medical facilities, are centred on and around *Malé* (MPND, 2002). As Connell (1993) states, "uneven development and urban bias are typical of even the smallest island microstates" (p. 131).

The economic indicators of the Maldives show a steady rise. However, the country is vulnerable to external factors as it relies on imports for its basic food and clothing needs. The relative isolation of the country and the remoteness of the islands are factors that are considered detrimental for small island states in the transition to developed country status (Connell, 1993). The advent of the Internet and the World Wide Web (WWW) has been a promising development for countries like the Maldives as geographic isolation can be reduced with the use of ICTs. However, the costly infrastructure required to reap its benefits is hindering the maximum use of ICTs.

In the same way as many other comparable developing countries, the Maldives is experiencing the digital divide, where the people on the capital island, Malé, have access to and skills in the use of ICTs, albeit limited, and those on the outer islands have much more confined access or no access at all (Ahmed, 2004).

The basis of this study arises from the perceived difference in the level of access to and attitudes towards information in different countries with differing levels of development. The literature supports the provision of information as a prerequisite to successful national development. It is therefore the aim of this study to focus on areas of information provision and access in the Maldives that need to be addressed to attain the maximum benefit of the available resources.

[1] A map of the Maldives is at Appendix 1.

1.3 Research method

In this regard, it is proposed to study the level of access and use of information sources and services by the Maldivian community. The study uses a mixed methods research approach where a level of triangulation will be attempted to ensure that the methods are complementary and that the findings and recommendations are well-founded.

The methods employed in this study include the following:

1.3.1 Document analysis

The present information culture of the Maldives is studied and evaluated based on available documentation and official records of organisations which offer information services and which deal with information infrastructure in the Maldives. This is presented as background to the research, and partly addresses objectives 1, 2, and 3 of the project. Additionally, a literature review presents an evaluation of different information policies and policy initiatives in countries similar to the Maldives in developmental status. This review of literature is also used to assist in the framing of the survey and the semi-structured interview questions.

1.3.2 Survey questionnaire

To identify the information needs and information use of the people of the Maldives, a target community was selected from a rural island and from the urban capital, Malé.

The questionnaire aims to establish the level of access and perceived lack of access to information by each community. It will also assist with an analysis of literacy as well as the information literacy levels of the communities. The literacy level is emphasised here as English literacy skills, since the high literacy rate of the country reported in official publications does not really coincide with language literacy skills needed for meaningful access to the wide array of information on the Internet, which is predominantly in the English language.

It is proposed to conduct the survey face-to-face, to reduce the non-response rate associated with postal questionnaires, and it is believed this approach would be more readily accepted by the rural community.

The sample selection from each community will be based on a stratified random approach and it is proposed to select every five households on selected streets, then selecting one male and one female above 18 years of age who consent to participate. It is planned to have 50

completed questionnaires from each of the communities. The survey addresses objective 4, and also contributes to objectives 1 and 5 of the project.

1.3.3 Semi-structured interviews

Relevant stakeholders in the information sector of the Maldives will be interviewed to obtain a more insightful view of their plans for the future with regard to information provision and access, focussing also on policy level issues. The interviews will be of relevant official(s) from the:

- National Library (NL);
- Ministry of Legal Reform, Information and Arts (MLRIA);
- National Centre for Linguistic and Historical Research (NCLHR); and
- National Centre for Information Technology (NCIT).

The analysis of the interviews complements the document analysis above and contributes to objectives 1, 2, and 3 of the project.

1.3.4 Final analysis

The outcome of the literature review, document analysis, survey and interviews should highlight the areas that need to be addressed in the information infrastructure for national development efforts in the Maldives. This answers objective 5 and is used to draw-up recommendations to address objective 6 of this project.

1.4 Significance of the research

The aim of the proposed research is to establish the importance of a healthy information culture in the development of the Maldives. It is generally believed that an increase in the knowledge base of any community will be a significant factor in helping solve specific and chronic individual and social problems (Ramirez, 2002).

The findings from this present study may help in the design of information services that would be useful to the people of the Maldives, more specifically in rural areas. The study should contribute to the enhancement of the country's information culture with a specific focus on the enhancement of information infrastructure and information literacy which will:

- have an impact on information provision in Maldives;
- bring forth the lack of information policies/legislation that may be keeping the country from reaching its information potential;
- contribute to the research literature on the Maldives; and
- contribute to the international literature on other comparable situations.

1.5 Limits of scope and key assumptions

Only one rural island will be selected among the 195 rural islands due to the time constraints and the scope of this project. This might have implications on the generalisability of the survey outcomes to the entire rural community of the Maldives. Furthermore, the survey is only inclusive of people above 18 years of age. This will have implications on the generalisability of the outcomes to the entire community. Furthermore, the limited number of survey participants from each community may not provide a statistically strong quantification of the outcomes. A larger sample, especially from the urban community was desired. However, the survey communities and the sample size were limited in this study due to the limited time available to conduct the project.

1.6 Chapter outlines

This chapter, Chapter 1, presents an overview of the project. It outlines the specific research questions and the objectives to be achieved by the end of the project. It also outlines the significance and the limitations of the research.

Chapter 2 explores the relevant literature within the information science discipline. It specifically considers the literature that deals with the relationship between information and national development. It also explores the concept of information culture both in the organisational context as well as the societal context. Based on these, and other relevant literature, it draws out the elements of an information culture and finally teases out the importance of the role of libraries and information services in all the elements presented. The last section in this chapter investigates the efforts of some developing countries to address the information gap.

Chapter 3 provides an introduction to the Maldives and traces the developmental milestones in areas like economy, literacy, education, oral tradition, and take-up of new technologies. It also explores the existing research culture, provision of information services and adoption of information policies and standards.

Chapter 4 describes the research design outlining the methodological approach and the specific research methods that were utilised, explaining the reasons for their adoption. It describes the development and implementation of the research instruments and identifies the limitations in each. The sampling strategy that was adopted in the selection of participants for the survey and the interviews is also outlined.

Chapters 5 and 6 presents the results of the field work from the rural and urban survey and the interviews with the information stakeholders. Chapter 5 is devoted to the results from the

surveys. It includes an overview and describes the participant recruitment procedure, things that worked and those that did not. It also includes detailed data tables of the results from the survey questionnaire and these are presented as individual community results, yet in a comparable format between both communities. Chapter 6 includes the results from the information stakeholder interviews in narrative form bringing together relevant themes based on the objectives of the interview component.

Chapter 7 presents discussion based on the analysis of the results from both the survey and interviews in light of the background information and the literature review. It also includes a section on the methodological issues and limitations arising from the project that initially were not foreseen.

Chapter 8 is the concluding chapter and summarises key conclusions arising from the project and also presents recommendations in light of these conclusions. It focuses on broad trends in library and information service provision, which seem to be the most appropriate in the present context.

Chapter 2: Literature Review

The following literature review will explore the role of information in the development process and review the context of information culture within the organisational as well as the societal domain. This will be followed by a review of the importance of libraries and information services and information literacy in enhancing information culture and will investigate efforts by some developing nations to address the information gap between developed and developing countries.

2.1 Information and development

Information, one of the buzzwords in the developmental context, has been defined as knowledge in communicable form, either written, printed or in speech (Orna, 1999). Information becomes knowledge when context is added to it; by synthesis, reflection or interpretation (Davenport & Prusak, 1997). Furthermore, as Gathegi (1990) states, "development is related to knowledge. Knowledge is derived from information. Knowledge and, therefore, information are vital to the development efforts of any country" (p. 1).

Due to the nature of information and knowledge being difficult to quantify, the direct relation between information and development is often difficult to portray. However, the literature does contain numerous references to this relationship. For example:

> The relationship between information and development appears to be close. If for example, we look at the most successful Asian economies – Japan, Singapore and Korea – we find that they are indeed countries in which economic and scientific information are widely and easily available (Feather, 2004, p. 118).

The importance of information in the development process, whether in an organisational context, in relation to business performance, or in terms of a country's economic development, is well documented. These include, but are not limited to studies by Bhatt, 2004; Dasgupta, 1993; Dube, 1988; Evers, 2001; Feather, 2004; Gathegi, 1990; Ginman, 1987; Grimshaw, 1995; Horton, 2000; Howkins & Valantin, 1997; Iqbal, 2004; Khan, 2003; Koren, 1997; Kularatne, 1997; McConnel, 1999; Menou, 1993; Morales, 2001; Sharma, 2005; Stueart, 2000; Vaughan & Tague-Sutcliffe, 1997; and Wang, 2006. Studies regarding the impact of information on development had been carried out as early as 1962 in the U.S. (Lester & Koehler, 2003).

It is acknowledged that information services contribute significantly to the economic well-being of countries and that timely access to information is vital for economic growth. Stueart (2000) states that, according to a recent report from the International Development Research

Centre, “the most vital difference between… rich and poor nations, is the knowledge gap – the capacity to generate, acquire, disseminate and use scientific and technical knowledge” (p. 107).

The literature also contains extensive references to the importance of information in human development. Koren (1997) asserts that human development can be directly linked to the development of a nation and that information is a basic right of everyone. Sharma (2005) declares that “human development is a key ingredient in economic and poverty reduction” (p. 1) and that limited access to information and resources in developing countries, especially for the poor, is a vital factor hindering human development.

Yilmaz (1998) poses a controversial argument, stating that “unless a country has solved the main problems like hunger, education, health, social security and political freedom, it is not possible to realize the right to information” (p. 1). Conversely, it is also acknowledged that access to information is important to lead to an informed citizenry to attain political freedom and the like. Along these lines, the World Summit on the Information Society (WSIS, 2003) meetings in Geneva recognised that education, knowledge, information and communication are at the core of human progress, endeavour and wellbeing.

Steinwachs (1999) claims that, based on the importance of information for the development of countries and individuals it is important to take into consideration factors such as cultural aspects, which influence the successful use of information. The attainment of the successful use of information for the advancement of knowledge, which in turn assists developmental efforts, has been dubbed ‘knowledge society’. As outlined by Britz, Lor, Coetzee & Bester (2006), a knowledge society is characterised as a society where knowledge is the most important factor of production. Moreover, knowledge development is underpinned by a higher level of education, and the focus is not only on the use of modern ICTs, but more importantly on “contents, meaning and knowledge” (Evers, 2001, p. 13).

It is the information culture of a society that dictates if it is indeed a knowledge society. As Kularatne (1997) states, “the majority of people in developing countries do not seem to be aware of the information services useful to them” (p. 117). And it is believed that, to achieve the benefits of information, developing nations need to assess the information culture within the country to understand the situation and to identify the specific directions needed to undertake this endeavour (Raseroka, 2001).

2.2 Information culture

The term ‘information culture’ has been frequently used in the recent literature, commonly in the context of business performance, organisational culture, and organisational behaviour

(Chepaitis, 1994, 1997; Choo, Pierette, Detlor & Lorna, 2008; Curry & Moore, 2003; Davenport & Prusak, 1997; Davenport, Eccles & Prusak, 1992; Ginman, 1987; Grimshaw, 1995; Jarvenpaa & Staples, 2000, 2001). It has rarely been used in the context of a societal information outlook (Bauchspies, 1998). The information studies literature links concepts such as information literacy, lifelong learning, ICTs, mass communication, and the like, as identifying elements of 'information culture' (Bauchspies, 1998; Gendina, 2004; Hover, 2007; Kouznetsova, 2006; Leonhardt, 1988; Ponjuan, 2002; Ramirez, 2002; Steinwachs,1999; Sturges & Neil, 1998; Szecskö, 1986; and Zheng, 2005).

Irrespective of the stance of the above studies, whether in an organisational context or from a societal information outlook, the term information culture is associated with how people value, use, approach and handle information. Additionally, it incorporates notions such as information provision and level of access. Furthermore, it deals with the cultural conditioning of the group, whether in an organisation or in the general society at large.

Culture generally refers to a way of life, including behaviour, beliefs, ideas and artefacts (Banjo, 1998). Leidner (2003) views culture "as a shared mental model which influences how individuals interpret behaviour and behave themselves, often without their being aware of the underlying assumptions" (p. 510). This was derived, in part, from Hofstede's (1980, 1991) definition of national culture as the "collective programming of the mind that distinguishes one group of people from another" (cited in Leidner, 2003, p. 510).

2.2.1 Information culture in the organisational context

Information culture can thus be considered as the collective information behaviour of a community. Nevertheless, as Curry & Moore (2003) point out, the literature contains various definitions and perceptions of the term and its manifestations. One of the earliest uses of the term is found in Ginman (1987), where factors determining information culture in a business environment were studied based on a number of companies and it was concluded that a "highly developed information culture correlated positively with successful business performance" (p. 104).

Ginman's (1987) use of 'information culture' in the context of the importance of information as well as the material resources for an organisation's success is mirrored in the definition proposed by Curry & Moore (2003), where it is defined as "a culture in which the value and utility of information in achieving operational and strategic success is recognised" (p. 94). Davenport & Prusak (1997) use the term information culture to mean "the pattern of behaviours and attitudes that express an organization's orientation toward information" (p. 84). Information culture is described within Davenport & Prusak's (1997) description of a

new approach for information management termed information ecology[2]. They suggest that information culture is the sum total of the information behaviour acts of individuals and that information behaviour and culture are two interrelated concepts. They further state that information behaviour "refers to how individuals approach and handle information" (p. 83). What Davenport & Prusak (1997) describe in their work relates also to knowledge management, where access to information is not the same as knowledge, but focuses on the effective use of information to create knowledge.

Granger (2000) classifies information culture as one of the six elements of an information infrastructure model and identifies four forces, which work against "developing and sustaining an information culture" (p. 22). These include the misuse of information, the general lack of spatial awareness shown by many decision makers, the widespread fear of information and knowledge, and the general lack of good information management practices. Oliver (2004) considers information culture in the cultural domain of organisational culture to include national culture, corporate culture and occupational culture. She concludes that "information culture is shaped by attitudes towards and values of information" (p. 308).

The perspective taken by most of the literature in the organisational context, concisely summarised by Oliver (2004) is that the "values accorded to information, and attitudes towards it are indicators of information culture" (p. 288).

Given that information culture deals with collective behaviour, it would be appropriate to draw upon the 'information behaviour' literature within the library and information studies field. As Zheng (2005) states, "elements of information culture, such as users perception towards information, social values and patterns of behaviour related to the collection, interpretation and utilization of information are present in the IS [Information Studies] literature" (p. 2). This viewpoint is also presented in Davenport & Prusak (1997) and Webster (2006).

2.2.2 Information culture within the broader IS literature

The information behaviour and information seeking behaviour literature, does not appear to use the term 'information culture' as a collective approach to information behaviour. Nevertheless, it has some similarities and overlaps with the existing literature on information culture in the societal context. Fisher, Durrance and Hinton (2004) sum up the information behaviour literature as follows:

[2] Information strategy, information politics, information behaviour/culture, information staff, and information architecture are presented as the six most critical components of information ecology (Davenport & Prusak, 1997).

> While some researchers use it [information behavior (IB)] narrowly to refer only to information-seeking activities in a behavioral sense; others, such as Wilson (1999, p. 249), use it more broadly to describe "those activities a person may engage in when identifying his or her own needs for information, searching for such information in any way, and using or transferring that information," which Wilson (2000 [p. 49]) later rephrased as "the totality of human behavior in relation to sources and channels of information, including both active and passive information-seeking, and information use." It was along this line that Pettigrew et al. (2001, p. 44) defined IB as "how people need, seek, give, and use information in different contexts" (p. 754).

Wilson's (2000) totality of human behaviour explanation above is similar to the concept of information culture in the societal context proposed by Bauchspies (1998). The model of information behaviour presented by Wilson (1997) and referred to in Wilson (2000) identifies national culture as one of the possible factors that may influence perceptions of information needs, use, or non-use by individuals.

A complementary area within information seeking behaviour is the everyday life information seeking (ELIS) which Savolainen (1995) defines as ''the acquisition of various informational elements which people employ to orient themselves in daily life and solve problems not directly associated with the performance of occupational tasks'' (pp. 266–267). Some literature on ELIS also uses the notion of social capital to describe how the resources made available to individuals through social networks influence individual information seeking (Johnson, 2007). Furthermore, ELIS has its relevance within the context of information culture as evident from the following description by Savolainen (1995):

> One is born in a culture within a social class which gives basic models for mastery of life… The culture with its specific values not only directs habits and attitudes to working life but also to spending leisure time, for example, the role of book reading and television watching. Naturally, in addition to specific social classes those evaluations are affected also by the generation to which one belongs (p. 264).

In other words, it is the information culture of the given society that dictates how people go about seeking information needed for everyday life. In this perspective, Spink and Cole's (2001a) study investigating information seeking channels used by African American low-income households and Fisher, Naumer, Durrance, Stromski, & Christiansen's (2005) exploratory study to identify, among other things, people's preferred ways of seeking information, can be treated as studies of information culture of the study groups. Their use of the term 'information environment' and 'information habits' respectively, can be considered synonymous to information culture. For instance, in Spink and Cole's (2001a) research of information-seeking channels of the residents of Wynnewood, it is observed that the community's 'information environment' is based on their physical and territorial dimensions

(p. 59). This proposition is supported in Spink and Cole's (2001b) work where it is argued that:

> The future for ELIS research lies with deepening and integrating the various ELIS components... What is needed is, first, a *deeper understanding of ELIS from diverse cultural and social situation perspectives*; second, the development of generalizable process models that hold across situations; and finally, the *integration of ELIS theories and models within a broader human information behavior context*. The Internet is the driving force behind broadening LIS's [Library and Information Science] analysis of information seeking beyond work and school. The interactive potential of this hybrid information flow channel should bring the power of information use to many more sectors of society than is now the case, but it also forces researchers interested in these issues to take a wider, *more integrative approach* to studying information seeking and use that includes *nonseeking behavior in its human information behavior perspective* [italics added] (p. 304).

The advent of the Internet has brought about changes in the way LIS provides its services. However, the use of the Internet and other modern information sources depends very much on the information culture of the society concerned. Sturges and Neil (1998) "believe very strongly that libraries, archives, documentation and information centres cannot meaningfully be discussed in isolation" (p. 2). They have to be considered within the context of a total information environment which encompasses issues from oral communication to virtual reality. In their study, they explore the role of radio, television, film, the press, computers, books, and publishing, and telecommunications to comprehend the information environment of Africa.

The distinction between 'information environment' and 'information culture' recognises the interaction of people that occurs within the culture. Information environment, as discussed by Seetharama (1992, cited in Bhatt, 2004), refers to information services, information dissemination, telecommunication, information personnel, and cooperation among information handling agencies.

The notion of the information society is noteworthy here as it is a term used within the information studies literature to refer to the current society. It connotes the importance and centrality of information in daily activities, in the economy, and in society generally, be it of technological, economic, occupational, spatial, or cultural conception (Webster, 2006). "The most common definition of an [information society] probably is technological… [However, during the past decade] a gradual shift can be observed in favour of more socio-economic and cultural definitions of information society" (Servaes & Carpentier, 2006, p. 5). The cultural conception of information society used by Webster (2006) can in other words be termed the information culture of a given society.

Along these lines of thought, Gilyarevskii (2007) states that information culture is the foundation of an information society; that "information culture is, among other things, insight into the underlying information mechanisms regulating human behaviour and social development" (p. 40). Steinwachs (1999) asserts that, apart from factors like access to information products and access to skills and willingness to invest, the culture of a given country plays a role in the adoption of the information society. She states that "national culture [patterns of thinking, feeling and potential behaviour of people collectively] can have an influence on the way in which people deal with information" (p. 194).

2.2.3 Information culture in a societal context

In the literature which uses the term 'information culture' in a societal context, it is without exception linked to ICTs. It is also linked to information literacy and the use of library and information services (eg. Gendina, 2004; Menou, 2002; Ponjuan, 2002; & Ramirez, 2002), information activity within cultural norms (eg. Hover, 2007; Menou, 2002), creation and transfer of information (eg. Bauchspies, 1998; Szecskö 1986; Zheng, 2005), and in relation to mass communication (eg. Smaele, 2007; Szecskö, 1986). Sturges & Neil (1998) propose the use of the mass media, publishing, telecommunications, and computers, in addition to libraries, archives, and documentation and information centres, to comprehend the information environment.

Szecskö (1986, p. 201) refers to 'information culture' to mean "a citizen's active, selective and critical relationship to public information" and explores the role of mass communications in the information environment. The definition proposed by Bauchspies (nd) takes a broader view where he states that "societal information culture is the observation of intended and random collective behaviour extending identity into macro forms, both as originating proponent and resulting imposition of how culture influences information's creation and transfer" (mail list).

Bauchspies (1998) defines information culture as "information activity understood in [a] cultural context" (p. 5). According to Menou (2002), the formation of an information culture "involves the adaptation of pre-existing cultures" (p. 1). Moreover, he states that cultural evolution is also counter dependent on information and knowledge. Ramirez (2002) supplements this to encompass personal and collective social activities as a whole that have been affected by the digital technologies and declares that information culture is increasingly related to the "ways in which human beings communicate with each other, inform others and become informed ourselves" (p. 5). Gendina (2004) also links information culture with the society, where information culture is defined as an "independent scientific direction and

educational experience" (p. 4) arising from global factors like the realization of a fundamental role of information in the development of society. The concept of creating a person's information culture is promoted, and is presented as a combination of information outlook, information literacy and ICT literacy of individuals.

Gendina (2004) also emphasises that personal information culture is a component of the general culture of the individual; the sum total of information outlook and a system of knowledge and skills providing targeted independent activity to optimum satisfaction of information needs using both traditional and new information technologies. In this regard, the sum total of the personal information culture of individuals in a country will be mirrored as the collective information culture of that country.

Ponjuan (2002) takes up information culture in the context of teaching and learning, science and technology, business and industry, and social development as the four key sectors. These are reviewed within the frames of information literacy and information culture, as well as library and information proficiencies. She also identifies human, information, infrastructure, cooperation, leadership, and social conditions as the key dimensions and components that contribute to the establishment and operation of an effective information culture (p. 4). She further states that information culture is a broader concept than is information literacy and that these two are mutually complementary concepts, which are also interdependent on information infrastructure.

A study conducted by Zheng (2005) on information culture and development in China, concludes that to truly step into the information society, developing countries need to adopt holistic approaches that are sensitized towards cultivating a modern information culture, and make incremental social institutional changes alongside technological innovations. This was also addressed in an earlier review carried out by UNESCO with regard to the progress and development of library and information services in eight developing countries which concluded that urgent action was needed in information policy level issues (Gray, 1983).

Based on these observations, it appears that there is no consensus on a definition of information culture. Scholars have either come up with a new definition based on their particular approach to the situation, or simply ignored addressing it. Some authors use the term as a general cultural identity without dwelling on its meanings. For instance, Raseroka (2001) states that "an essential ingredient for the development of an information culture is the provision of high interest or understandable materials" (p. 326), while Cohen (2006), in one of the very popular blog entries of the year in the LIS field, states that "the universe of information culture is changing fast and that libraries need to respond positively to these

changes to provide resources and services that users need and want" (blog entry). Furthermore as Bauchspies (1998) explains "the existing cultures swept up in electronic communications intensify, evolve, and also provoke new forms of cultural identity" (p. 6).

The concept of the information society in the cultural context "is perhaps the most acknowledged, yet the least measured" (Webster, 2006, p. 19). This lack of appraisal may be attributed to the question of the 'how' of such a measure. This is a tangible difficulty in this endeavour since the culture of one community varies from another, in some cases in minor ways, and in others quite major ways. This would be true for individuals within a given community. Furthermore, as Bauchspies (1998) states, the two words 'information' and 'culture' are fuzzy and debatable words.

2.2.4 Elements of an information culture

Therefore, it might become easier to study the information culture of a society if it is broken down into its core elements. Based on the literature explored, information culture can be summarised as having a number of contributing elements to its enrichment and fulfilment. In the context of developing countries, these elements include: indigenous knowledge (Briggs & Sharmp, 2004), ICTs (Britz et al., 2006; Curry & Moore 2003), information literacy (Gendina, 2004; Menou, 2002; and Ramirez, 2002), research & development and publishing (Britz et al., 2006; Hover, 2007), libraries and information services (Cohen 2006; Kouznetsova, 2006; Ponjuan, 2002; Savolainen, 1995; Sturges & Neil 1998), mass media (Sturges & Neil, 1998), and information policies (Gray, 1983). These are shown diagrammatically in Figure 2.1 and described below.

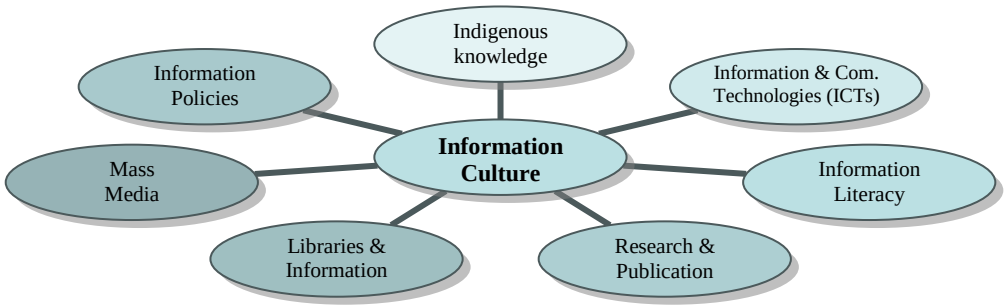

Figure 2.1: Elements of an information culture

Indigenous Knowledge

The preservation and use of indigenous knowledge, especially in developing nations is currently regarded 'as important as' the use of scientific knowledge (De Walt, 1994; Kamira, 2003; Sukula, 2006). It is increasingly believed that the western knowledge system,

commonly named scientific knowledge, alone is not achieving its promise of development (Briggs & Sharmp, 2004).

Although indigenous knowledge as an important factor in economic development has been accepted only in recent years, Nakata (2002) declares that the importance of indigenous knowledge has been in existence in the educational realm for the last three decades even if it was not formally acknowledged as "indigenous knowledge" (p. 285). It was referred to in a cultural context, for instance, cultural learning styles, cultural appropriateness, and cultural content. Nakata emphasises that "references to culture are references to a whole system of knowing, being and acting" (p. 285).

Preservation of indigenous knowledge is important especially in societies that have a strong oral culture and rely on this oral tradition to pass down knowledge to the generations. This is common in developing countries (Raseroka, 2003a). The knowledge is based on their experience and also from information that has been passed to them from older generations, neighbours and peer groups in the form of songs, proverbs, religious stories, family history, folklore and conversations about life. It is increasingly feared that this important knowledge might be lost in this transition and that "the amount of information that can be stored by an individual or even collective memory is limited in quantity and by the lifespan of individuals" (Evans, 1992, p. [3]).

From the library and information perspective, the preservation of indigenous knowledge is important, as the focus in this discipline is on recorded information. However, the collections held in libraries of developing countries are predominantly western oriented as the local community does not produce recorded information that can be physically held in libraries. This concern is raised by Raseroka (2003a) in terms of freedom of access to information by marginalised communities and in oral communities as "information continues to exist in forms that are not captured and shared" (p. 207).

ICTs

The second element in the societal information culture discussion is ICTs, which play a vital role in the storage, dissemination and handling of information. ICTs are crucial for developing countries as they contribute to innovative knowledge societies. The present information environment commonly referred to as the information society, is empowered through the use of ICTs as much as by increasing the level of information literacy and empowerment of the society through access to, and use of, knowledge (Curry & Moore, 2003; Dearnley & Feather 2001; Raseroka, 2001). ICTs facilitate access by bringing

information more readily to the consumers and by flexible search possibilities within huge repositories of information.

However, the infrastructure cost of ICTs has a dampening effect for the developing nations, as investment for the required connectivity is huge when compared with their limited budgets. The earlier discussions of information gap, where industrialised countries had access to quality information while poor countries did not, is now mirrored in the digital divide debate. The term "digital divide" refers to the gap between individuals, households, businesses and geographic areas with regard both to their opportunities to access ICTs and to their use of the Internet for a wide variety of activities (OECD, 2001 cited in Wedgeworth, 2004, p. 16).

It is a foregone conclusion that, despite the high costs associated with building national infrastructures, the cost of not doing so is likely to be much higher for developing countries as ICTs open up potential channels of information access (Credé & Mansell, 1998). Without access to ICTs, the north-south gap, or the digital divide will increase as ICTs is here to stay and industrialised nations are making progress at a fast pace.

Information literacy/ ICT literacy

In line with technological innovations, information literacy/ICT literacy has more importance within the current information culture discussion. As Raseroka (2003b) states, various terms have been assigned to different aspects of information literacy including, but not limited to, computer literacy, digital literacy, internet literacy and network literacy. An information literate person has been defined by Ramirez (2002) as an "informed and information-creating individual" (p. 10). Information literacy also includes ICT competency, which means having the "capabilities required to use ICT for the solution of cognitive information-based tasks" (Markauskaite, 2005, p. [2]).

It is also proposed that all these literacy types are in effect encompassed in 'information literacy' since information may be presented in a number of formats and applies to more than just the printed word (Eisenberg, Lowe & Spitzer, 2004). As John (2005) explains:

> Information literacy encompasses much more than access to and the ability to use computers, the Internet and associated paraphernalia. It includes an ability and willingness to understand the value of information, to recognize entrepreneurial opportunities in the sector, to locate, evaluate, and select appropriate information sources, and to translate information into knowledge to be used productively, even strategically (p. 2).

Eisenberg et al. (2004), drawing on examples throughout the world, demonstrate that information literacy is an important concept in the lifelong learning of citizens, as it ties in

with economic development. It has also been argued, in part by Warschauer (2004), that the digital divide is really the literacy divide, and that the key to bridging the divide is through information literacy.

The traditional focus on the disparities between infrastructural access has been merged with the know-how of the technologies (Barzilai-Nahon, 2006; Palackal et al., 2007) and more importantly in the provision of local content in local languages (Miranda et al., 2007).

Research and Publication

Another element of information culture emerging in the literature is that of research culture. Research and development activities are taken as an indicator of advancement of its information culture since research builds on existing knowledge as well as creating new knowledge. As Smith (2002) states, research in developing countries is important, and even more important is the publishing of the research.

Scholarly journals have been in existence for several hundred years. In fact, according to Schauder (1994) the first scientific journals appeared in 1665 in London (*Philosophical Transactions of the Royal Society of London*) and in Paris (*Le Journal des Scavants*). However, even today, developing nations are lagging behind in the scholarly communication arena. The research scenario in developing nations, as summarised by Burton (1992, p. 65) portrays a very bleak picture where it is stated that developing countries have 78% of the world's population, 12% of the world's telephones, 5% of the world's scientific and technical publications, and 3% of the world's research and development expenditure.

The cause of this trend is rooted in the information and communication gap that exists between developed and developing countries and the inability of the latter to communicate their research findings. As Arunachalam (2003) summarises, where research is undertaken in developing countries, they have a comparative disadvantage in the communication, transmission, and collaboration of their findings with their Western counterparts.

Moreover, scholars from developing countries have a tendency to publish their, albeit limited, domestic research in journals overseas. This happens partly because most of the developing countries do not have credible avenues for publications, and because of the low impact factor of journals from the developing countries. This hinders access to, and widespread use of, the research by the local community as they have limited access to information sources from overseas. It also has a cyclic effect since resources will have to be invested outside the country to get access to this domestic research, which was conduced locally but published elsewhere (Evans, 1992).

Research aside, other general publications like children's literature are also an important element in the information culture. The publishing industry represents the written communication occurring in a country and there is difficulty in accessing local literature in developing countries. According to Omekwu (2003), this can be attributed to the:

> lack of adequate bibliographic control framework and tools, low level of awareness of legal deposit legislation, sub-standard nature of publication, the unorganized book trade and the fact that the majority of publications emanating from developing countries could be classified as grey literature (p. 130).

Those limited resources that are available in libraries and information centres in developing nations are in most cases in foreign language. This acts as a barrier to accessing readable information by the general public. As Raseroka (2001) states "an essential ingredient for the development of an information culture is the provision of high interest or understandable materials" (p. 326).

It is increasingly acknowledged that the networked environment has been more prominent in this endeavour as the web has paved the way for easy 'publishing', which to some extent breaks through the predominant western representations. Nakata (2002) claims that the "web supports publishing in ways that disrupts established 'elite' forms of publication and which 'authorise' previously excluded groups from publishing" (p. 287). However, there will still be problems of access if the appropriate facilities cannot be provided to the wider public.

Libraries and information services

The role of the library in information culture is evident. The advanced information society is depicted as a networked society where the libraries themselves are "public access terminals of information highways", and it is stated that "the information culture development of the information specialist… as well as the users must become priority" (Kouznetsova, 2006, p. 1).

Gilyarevskii (2007) states that mastering the skills to handle information, which for a long time has been closely associated with the library profession and library culture, is a requisite of any specialist in the modern day context. Gilyarevskii further states that computer and information literacy is only an initial element of an information culture and that understanding the social structure of the information world, and understanding the social laws of intellectual communication, are the most important aspects that need to be harnessed for effective use and dissemination of information.

Libraries and information services play a pivotal role in bringing together all other elements described here, as it is the role of the library to collect, organise and disseminate information,

increasingly using modern technologies. As Newth (2001) proclaims, “libraries constitute the collective memory of humanity” (p. 263). Moreover, the notion of the library is socially and educationally central to society as it promotes the free flow of ideas, the spread of knowledge and promotes reading and writing. This will be considered further in the section on the role of libraries and information centres and information literacy in the enhancement of information culture.

Mass Media

The sixth element in this discussion on information culture is mass media. The mass media is a powerful information source in any country. As Sturges and Neil (1998) write, to comprehend the information environment in a country, “libraries, archives, documentation and information centres cannot meaningfully be discussed in isolation” (p. 2). It is stated that the role of radio, television, film, the press, computers, books, and publishing, and telecommunications has to be taken into consideration as well.

Stilwell, Leach & Burton (2001) report that radio can be a very effective means of communication and spreading of information as it can be broadcast widely to a large community in a cost-effective manner. Literature also shows that in addition to radio, television and newspapers are main sources of information for people in developing countries (Johnson, 2007).

It is also true that most developing countries levy some form of control over the dissemination of information by the traditional media, like radio, television and newspapers (Smaele, 2007). However, the introduction of ICTs has opened up much wider means of uncontrolled communication which help in the open flow of information (Samad, 2001).

Information Policies

The regulation of communication technologies is governed by the information policies in existence and hence is an important element in the information culture discussion. Information policy is a “set of interrelated principles, laws, guidelines, rules, regulations, and procedures guiding the oversight and management of the information lifecycle” (Andrychuk, 2004, p. 9). The information lifecycle is described as the process of the creation, collection, organization, distribution, retrieval, use and preservation of information (Andrychuk, 2004).

Information policy is a broad area and there is no “consensus about what constitute information policy” (Dearnley & Feather, 2001, p. 64), as information is multidimensional and involves both economic and social considerations. Information policy encompasses a wide variety of areas and includes, but is not restricted to, copyright and intellectual property,

data protection, freedom of the press and freedom of information, international communication policy, telecommunications and broadcasting policy (Rowlands, 2003).

Information policies, specifically in the telecommunications and ICT areas are critical for developing countries in efforts to converge the information gap. As Kapur (2001) proposes, in developing countries there is a risk that ICTs might actually result in a divergence from advancing the information sector. He further states that "to maximise the chances of success, developing countries must ensure that investment in ICT is accompanied by investment in social capital" (p. 6). This will be facilitated through appropriate policy measures for a co-ordinated approach to information across all sectors.

Based on the importance of strategic information use and provision across disciplines, there have been efforts at coordinating national information policies. National information policies came to the forefront during the late 1960s and UNESCO has been urging developing countries to address this issue (Rehman, 1996). Rehman (1996) reports that the strategic policy issues that need to be taken into consideration in the formation of national information policies are: copyright and intellectual ownership; privacy rights; economic aspects, especially due to the monopolistic nature of governments in developing countries; classified information, for purposes of national security; socio-politico-cultural and local issues, for sovereignty and protection from cultural imperialism, technological issues, including media and telecommunications regulations; and international dimensions, regarding trans-border data flow.

All of the elements of information culture described in this chapter are shaped and influenced significantly by information policies in place in a given country, be it in freedom of information and copyright legislation, patenting, publishing standards, or any other similar policies (Feather, 2004). Moreover, information policy commonly deals with the governance of information access, information retrieval, information storage and dissemination, use of information technologies, information services, and subsequently how information affects our society (Bushkin & Yurow, 1980; Chartrand, 1986; Judge, 1985; Morales, 2001; NCLIS, 1976).

The absence of a national information policy leads to loss of information within agencies which results in duplication of projects and wasted resources (Bender, Kadec & Morton, 1991). Therefore, national information policies are essential for long-term strategies in the provision of information for socioeconomic development (Raseroka, 2001).

In summary, the elements outlined above comprise a broad area and some fall within slightly different disciplines. Societal information culture is important in the process of information

generation as it is the prevailing culture that adds value to the information and information gathering. Information is produced by the society which, as Morales (2001) states, results in a "conscious and unconscious interest of transmitting it individually and collectively" (p. 28). This places library and information services at the centre of information culture discussions. Therefore, for the purpose of this research, subsequent sections will emphasise the role of libraries and information services and information literacy.

2.3 Role of libraries & information literacy

Libraries and information centres have a significant role in the enhancement of an information culture. The IFLA/FAIFE libraries and intellectual freedom (cited in Nicholson, 2002) state that:

> The right to access to information and ideas is vital for any society. If citizens are to participate and make informed choices, they must have access to political, social, scientific and economic information and cultural expressions. They need access to the widest range of ideas, information and images. Freedom, prosperity and the development of society depend on education, as well as on unrestricted access to knowledge, thought, culture and information (p. 259).

Libraries play an important role in facilitating the right to information as well as to freedom of expression as outlined above. The right to information can only be facilitated by the right to have access to information (Koren, 2000). Koren further states "one can hardly form an opinion, discuss matters, write an article or make a news programme without sources of information" (p. 275).

This right to access information can only be fulfilled with free and open access to information, whether it be print, digital, or networked access. When considering the scenario in developing countries, and especially in the rural areas, there is no better way of providing access than through public libraries. Recent research conducted by Johnson (2007) concluded that public libraries are important contributors to solving the information problems of people with poor social resources.

However, Tucker (2003) reports that library provision is low on the priority lists of governments in poor countries simply due to the lack of resources to set up libraries when they have to deal with problems like hunger and poverty. Tucker (2003) further states that in some countries, political priorities play a role in the provision of resources by controlling what a library may hold. As discussed earlier, developing countries also have the problem of not having the right information in the right format and language.

In most developing countries, there also exists a vast difference between the urban and rural communities in terms of access to and use of information (Kapur, 2001; Menou, 1993). For

those with the resources and language skills to access them, the Internet and satellite television services provide ready access to information from other countries. Nevertheless, this does not apply for the poor. The role of the public library in facilitating information is most needed here. The UNESCO Public Library Manifesto facilitates this by advocating free access to public libraries. As pointed out by Kagan (2000), the Manifesto further states that "information is not free, but libraries can make it freely available to the community… wide access to information can empower citizens and therefore be a method of wealth distribution" (p. 29).

Hence, it is crucial to empower people through information literacy, which is increasingly seen as an important component in attaining the status of knowledge societies (Iqbal, 2004). Libraries play an important role in improving literacy as well as information literacy and providing information appropriate to the users (Kagan, 2000).

The Alexandria Manifesto on Libraries, the Information Society in Action (2006) states that:

> Libraries and information services contribute to the sound operation of the inclusive Information Society… regardless of frontiers… The unique role of libraries and information services is that they respond to the particular questions and needs of individuals… Libraries are essential for a well informed citizenry and transparent governance… They also build capacity by promoting information literacy and providing support and training for effective use of information resources, including ICTs (p. 66).

With ever-increasing avenues of information, literacy is essential. Basic literacy has evolved over time and, today, the ability just to read and write cannot be considered as literacy (Wedgeworth, 2004). It has to be broadened to be able to contemplate the dynamic information available in different medias as opposed to the traditional print-based static form. Wedgeworth (2004) further writes that adult literacy needs to be targeted, as this will have a multiplier effect and can empower the community, and that libraries have a greater role in adult education in developing nations, as they are the group of people who do not have the benefits of modern education in places where it has been introduced recently and imparted to the young.

Raseroka (2003b) states, "the library is a point of convergence for many communities, systems and disciplines that influence access to information" (p. 110). For instance, it facilitates the sustenance of lifelong learning; acts as a meeting place for people with their information needs; is an institution where indigenous knowledge content can be organised, preserved, safeguarded and made accessible; provides ICT infrastructure to facilitate public access to information which strategically helps in the enhancement of the information culture of the isolated rural population (Raseroka, 2003b).

In summary, to gain the strategic advantages of information, nations need to invest in establishing relevant policies to govern information use, access, and provision. The absence of copyright legislation hinders intellectual creation while lack of patenting hinders innovation. In addition, consideration needs to be given to the incorporation of information literacy in education curricula in schools, colleges and universities. Iinformation policies are essential for effective and efficient use of the limited resources, especially in developing countries. Without proper policies, useful and scarce resources are spent on different goals in an unsystematic manner resulting in their inefficient use.

The next section will look at information policy issues and information initiatives in other comparable developing countries in establishing or enhancing their societal information culture.

2.4 Examples of information policies and information initiatives

2.4.1 Telecentres

Based on the literature explored, the establishment of multi-purpose telecentres, coupled with other information services, has emerged as a strong initiative in the provision of ICTs for rural areas. In attempts to address the disparities in information access in rural areas, countries have taken up telecentre development projects at the community level (Hudson, 2000). Telecentres are usually established in areas where there are no library services with the aim to foster "broad access, social use and the appropriation of digital technologies to meet the information needs of their communities" (Raseroka, 2003a, p. 208). Telecentres have been effective sources to the development of IT skills and capabilities which are essential for the effective use of ICTs for social development (United Nations, 2005).

Among the main factors determining telecentre sustainability, Roman & Colle (2002, cited in United Nations, 2005) identify: participation by the community; national commitment; partnerships between government and NGOs; networking between centres to share experiences and research; viable long-term planning and a business plan; and a focus on information, rather than just connectivity. The United Nations (2005) also reports on successful use of telecentres in Egypt with its IT Clubs, and on the experience of Mali in developing local content.

However, development of telecentres should not be undertaken in a manner which would hamper achievement of the initial objectives. As Sturges and Neil (1998) outline, "in proposing the extension of basic reading services into multi-media cultural centres mixing oral, visual and written material facilitated by 'information animators', there is a danger of

over-sophistication" (p. 146). In this regard, they further state that Zimbabwe illustrates how basic needs can be satisfied by the use of village community workers in schemes such as home library projects, providing a multiplicity of local initiatives. The African country of Niger initiated a seven-year program to build a network of 160 rural teleBureaus, initially with radio transmitters, followed by another phase of information and communication equipment, like computers and telephone, to "provide access to information and communication for social and economic development" (Gallagher & Djilali, 2001, np.).

The idea of telecentres is related to electronic resource centres. Esslemont (2007) writes that "many individuals are online but cannot download files owing to their size, [or] cannot use the downloaded material owing to version issues with the application" (p. 13). Esslemont proposes that this can be solved by offline access to electronic material through the establishment of an electronic resource centre as a point of reference in each country, comprising of good Internet connectivity, adequate computers to access material, and permanent staff capable of demonstrating basic computer use, providing librarian services in digital form, and offering training in desktop publishing for local communities.

2.4.2 Initiatives in other countries

The Maldives is a small island developing state in the Indian Ocean and is unique compared to other small states in terms of geographic dispersion, coupled with a united local language and one religion. However, the Maldives shares many similarities in terms of socio-economic features with other small island developing states, particularly with countries like Seychelles, Mauritius, Tuvalu, Kiribati, Nauru, St.Lucia, Barbados and the Bahamas (Ghina, 2003). The Maldives also has its common features, developmentally, with countries like Sri Lanka and Thailand, and African developing countries.

With geographic isolation, the Maldives experiences information isolation too. In this regard the following section will attempt to study what other countries similar to the Maldives have done to enhance information provision, use, and accessibility. This review is not comprehensive, but rather an overview of a variety of initiatives and range from mobile library provision, increasing literacy, provision of ICTs, and to the enactment of required legislations to facilitate information flow.

African Nations and library provisions

Issak (2000) proposes that African librarians "must begin to know their potential users, and not only assume that they are school children" (p. 3). He reiterates that in developing countries library services to the adult are usually ignored or undervalued.

Public reading initiatives are common in remote areas of Western and Central Africa where the Organisation Internationale de la Francophonie (OIF) has set up 213 reading and cultural activity (RCA) centres (Weber, 2007) . The RCA centres consist of collections of books, newspapers and board games and the like. These centres are funded through the OIF and managed by local volunteers and have become a powerful tool at the service of development agencies like UNICEF (Weber, 2007). "Public reading does not replace education or literacy policies… [Nevertheless] it is important because it gives everyone the possibility of an opening to the world" (Weber 2007, p. 7).

Another initiative to address the information needs of rural communities is the establishment of mobile library projects. Mobile libraries have been an effective and time-tested method to meet the library needs of small rural communities where it is not economical to have a library building. Mobile libraries are also economical in terms of the qualified staff needed to operate the service. These services may appear in various forms and operate under various conditions. In Zimbabwe, under its Rural Libraries and Resources Development Programme, four donkey-drawn mobile cart libraries are operational in the Nkayi district, servicing four cluster communities (Atuti, 1999). Another example is the camel library service for the Nomadic community in Kenya where the community is not large enough to justify a permanent library (Atuti, 1999). Doust (1999) reports that the mobile library run in Zimbabwe in Bulawayo is a success story where a mobile book service uses a bus to service schools as well as the public.

Mauritius

Mauritius, in the Mascarenhas Archipelago, is a developing island nation and has some similarities with the Maldives in that tourism plays a major part in the economy (Ramjaun, 1997). Ramjaun (1997) reports on the poor status of library services, sub-standard libraries, absence of proper legislation, poor budgets, conservative librarians, and lack of professional staff. He further states that, to improve the situation, "laws must be enacted to make it compulsory to decentralize library facilities to rural areas to cater for the neglected 71% of the [Mauritius] population" (p. 138).

The library profession of Mauritius has been strengthened with the National Library Act which was passed in 1996. The setting up of the National Library of Mauritius as the national bibliographic centre to network with other libraries in the country is a strategic direction that all developing countries need to consider (National Library, 2003).

Thailand

Thailand, a newly industrialised country[3] (Bożyk, 2006), has interesting developmental lessons for the developing countries. The Thais have employed community services to encourage and instil reading habits, and disseminate local information to the community, who otherwise might not interact with libraries or books. Butdisuwan (1999) details the success stories of Thailand in terms of door-to-door book boxes, reading campaigns, and mobile libraries delivered through horse-carts, motor boats, motorcycles or book vans. In the case of door-to-door book boxes project, a book box is taken to a household, left for a period of one month, and exchanged with another box.

Additionally, Thai libraries, in accordance with the UNISIST advisory committee for the workforce development of the libraries, have initiated documentation centres and archives to create a national information system (known as THAI NATIS). This is significant for other developing countries' endeavours to establish similar initiatives (Dhutiyabhodhi, 1999). The objective of the information system was to organise information resources for individuals as well as for national development, to develop a standard information system and service, to eliminate duplication, to provide various sources of information, and to ensure co-operation and coordination among libraries and information centres in Thailand.

Rural Brazil

The Arcas das letras (meaning 'a box of goodies') project in Brazil, described by Chaib & Gillen (2007), is noteworthy as it involves community participation in imparting literacy to the rural Brazilian communities through mobile libraries. "Initiated in 2003, and currently operating with over 3,611 mini-libraries … Arcas das Letra is one of the great Brazilian success stories in the field of literacy promotion" (Chaib & Gillen, 2007, p. 50). The residents are responsible for choosing the physical location, and are actively involved in the creation and management of their own particular collection based on their interests. It is also noted that the *arcas* (the mobile boxes) in which the books are shelved are made by prisoners in prison workshops, and these prisoners get a deduction in the number of days that need to be served based on their social contribution. The books for the *acras* are collected through donations and contain approximately 220 titles, which are regularly circulated to other communities. In addition to literacy promotion, "the initiative also aims to find ways to encourage the local communities to reflect on their own local culture and take pride in the value of their own tradition" (Chaib & Gillen, p. 51).

[3] Newly industrialised countries (NIC) are countries whose economies have not yet reached developed country status but have, in a macroeconomic sense, outpaced their developing counterparts (Bożyk, 2006).

Sri Lanka

Sri Lanka reports a success story in the provision of 24 hour Internet access to rural villages through an e-village project with the aid of a wireless mesh network. As reported by United Nations Development Programme (2006), a little known rural village, Machavilachchiya, in Sri Lanka "with no terrestrial or mobile phone networks, became the first village" in the country to have 24-hour Internet access in November 2006.

Another innovative approach is that of listening to the web over the radio in Sri Lanka (Hermida, 2002). It is reported that radio is bringing the Internet to the people in a mountain village of Sri Lanka who do not have access to the Internet and also lack the necessary English language skills. The commentators on the radio conduct searches on recommendations by listeners and translate the contents and broadcast them over the radio.

The Pacific

The small island nations in the Pacific have common features with the Maldives and their island nation's partnerships in facing ICT issues as well as information provision issues, are motivating.

The ICT working group of the Pacific islands, consisting of 22 island nations, identified the need for a regional ICT policy given the vulnerability of the island states. The ICT policy and strategic plan was endorsed in February 2002, which recognised the regional vision of "ICTs for every Pacific Islander" (Allinson, 2003, p. 1). The importance of telecentres is identified as a strategy in this endeavour.

The work done by the Pacific Islands Archives and Library Association (PIALA) is also a noteworthy partnership initiative. PIALA is a regional association committed to fostering awareness and encouraging cooperation and resource sharing among libraries, archives and museums and related institution of the Pacific Islands. PIALA has been in existence since 1991 and their annual conferences have been a central activity that promotes libraries and archives in this region (PIALA, 2008).

Another noteworthy initiative being implemented, to cater especially for the rural areas, in the Pacific region is the joint use school-community library model of service provision in South Australia and New Zealand (Bundy & Amey, 2006). As they explain, joint use libraries consist of "two or more distinct library services providers, usually a school and a public library, [serving] their client groups in the same building" (p. 502).

2.5 Conclusion

An effective information culture deals with the intersection of technology, society, and culture. Studying the information culture is important as it surveys the importance of information service provisions and the implications of and issues with the development of modern information technologies and use of the Internet in a societal context. It situates itself in the course of transition from orality to literacy, and moves through to the emergence of print and the present modern online environment. Its roots are in cultural change and the historical processes of development.

How information is valued, used, and explored is dependent on the culture of the society. Given the importance of information in the development process, it is necessary to study the existing information cultures in a given society in order to enhance and keep pace with developments in the information society. It is particularly important for small island developing states like the Maldives, which lacks economic resources other than human capital. As Lockhart, Drakakis-Smith, & Schembri (1993) state, "in microstates … 'viability of people' has a critical influence on socio-economic development" (p. 43), most importantly due to the fact that small island states lack other economic resources.

This study is also important, because as Ginman (1987) states, attempts to make changes in the "approach to information to one of intense interest in an environment hostile to that kind of culture will hardly succeed" (p. 105). Any modification or enhancement will be received favourably if it is introduced in such a way to comply with the prevailing culture and requirements. Hence, it is important to study the existing information culture in order to steer it in the right direction towards a knowledge society. No studies about information needs and information access and use by Maldivians currently exist.

The next chapter, Chapter 3, provides a background to the research setting of the Maldives, based on available documents.

Chapter 3: Background to the research

This chapter will provide the background setting of the Maldives, covering its cultural aspects, education, and information related areas. This information, along with the literature review in Chapter 2, lays the ground work for the survey questionnaire and interview guide described in Chapter 4 in the research methodology.

The cultural aspects of a country are shaped by a combination of factors including its origins, people, history, society and language. Therefore, the information culture of the Maldives also needs to be considered in light of its historical and social context.

3.1 Governance and legislature

The Maldives is a small independent island state in the Indian Ocean with tourism and fishing as the main income-generating activities (MPND, 2005). The country has been independent of foreign influence other than Portuguese rule in 1558 which was ousted after 15 years according to the official Chronicle *Tarikh*[4]; moreover, in spite of having British protectorate status from 1887 to 1965, the Maldives lacks a "colonial imprint" as the British took no hand in the internal administration of the country (Maloney, 1976, p. 656).

The Maldives was governed as an independent Islamic sultanate from 1153 to 1968 with a brief attempt to form a republic in 1953. In 1968 the sultanate was abolished and a republic re-established followed by the 1968 referendum on the constitution (UNESCO, 2007). The 1968 constitution was amended in 1970, 1972, 1975, and 1997. The constitution was again revised to cater for a more democratic form of government (UNESCO, 2007) and was endorsed in August 2008.

Ibrahim Nasir became the first president of the nation, under the second attempt at a republic, and held office from 1968 to 1978. He was succeeded by Maumoon Abdul Gayoom who was elected President in 1978 and re-elected in 1983, 1988, 1993, 1998, and 2003 (UNESCO, 2007). He was succeeded by Mohamed Nasheed in 2008 in the first multi-party presidential election held in the country.

The Maldivian Citizen's Assembly (*Majlis*) is a unicameral body of 50 members: eight appointed by the president and 42 popularly elected (two from Malé and two from each of the 20 administrative atolls) for a five-year term (UNESCO, 2007).

[4] The Maldivian chronicle Tarikh compiled by Hassan Thajuddin in the early eighteenth century is widely referred in the historical manuscripts of Maldives and considered as an authoritative account. It is written in Arabic and recounts the history of the kings from the conversion to Islam in 1153 down to 1821 (Reynolds, 1993).

3.2 Geography

The country is situated vertically across the equator in the Indian Ocean, with India and Sri Lanka as the closest neighbouring countries. Its 1,192 islands are distributed among 26 natural atolls, which are grouped into 20 atoll-units for administrative purposes. The number of islands in each of the atolls varies, with Kaafu Atoll having 107 islands while Gnaviyani Atoll is an island in itself (MPND, 2007). The average size of the islands is less than half a square km and only 196 islands are inhabited, with 83% of these islands having a population of fewer than 1,500 (MPND, 2007). Of the total population, 34.7% live on Malé, the capital island in Kaafu Atoll. Malé is the only island that can be considered urban. The geographic dispersion makes inter-island transport in the Maldives very expensive (Latheef & Gupta, 2007). Consequently, as yet, the country does not have a reliable transport infrastructure.

3.3 Economy

The country faces considerable challenges in the provision of equitable services and opportunities to its population of a little over 300,000, due to the dispersed nature of its geographical layout. Lack of regular transport and high costs associated with it, coupled with the difficulties of journeys on the sea during bad weather, constrains commuting between islands. Most public services, such as schools and medical facilities, are centred on and around Malé (MPND, 2002) and there is an increasing trend of internal migration to the capital island. In 1911, Malé had only 7.25% (5,236 of the 72,237 people) while today it holds approximately 30% (70,000 of the 300,000) of the population (MPND, 2007).

Income inequalities and poor access to basic social services for the scattered islands are serious economic considerations for the country in its developmental efforts (Asian Development Bank (ADB), 2007). Moreover, the Maldives is rendered economically vulnerable due to its narrow economic base with tourism accounting for a third of its Gross Domestic Product (GDP), followed by transport and communications (15%), manufacturing (8%) and fisheries (6%) (ADB, 2007).

Traditionally, fishing was the main industry in the Maldives. Today, even if tourism is considered as the main industry, the fisheries sector, consisting of approximately 80% of export income, is extremely important to the economy. Fishing has been expanded through mechanisation of the *Dhoni*, the local sea vessel, and is widespread throughout the atolls making it the main occupation of people in the outer atolls (ADB, 2007).

Tourism was initiated in the Maldives in 1972 and has been ever expanding from 1,096 tourists in 1972 to 602,000 tourists in 2006. The latest records show that 89 islands have been developed as exclusive tourist resorts (MPND, 2007). Resorts are developed on

uninhabited islands and, generally, tourists visit inhabited islands only in close proximity to the resorts, if at all. Due to this relative isolation of tourist resorts, tourism has not had a significant effect on the culture of the country except in the capital island Malé, which hosts several hotels.

Because of the poor soil condition, agriculture has never been a major industry in the Maldives. Agriculture presently accounts for less than 3% of GDP and the ratio of food imports to domestic food production is 10:1 (World Bank, 2007). The Maldives relies on the import of rice as the staple food, and virtually everything else from food to building materials.

The economic indicators show a steady rise with a high GDP, especially when compared with the rest of the South Asian countries with a dramatic and steady increase in the per capita income of US $771 in 1984 to US $2,514 in 2004 (World Bank, 2007). However, with its main industry being tourism and tourism-related work, the country is vulnerable to external factors. In terms of its robust economic and social development the Maldives was found to meet the graduation criteria from the status of a least developed country (LDC)[5] to a developing country[6] status in both 1997 and the 2000 triennial review (United Nations, 2001). However, due to the Maldives government's request and based on its economic and environmental vulnerability in the face of the eventual reduction in international assistance that will follow from this change, the graduation was delayed. Conversely, on December 20, 2004, based on its relative prosperity during that period, the Maldives was graduated from LDC to developing country status and will remain in the transitional stage until the year 2007 (Detlefson, Sapiro, & Schwartz, 2005).

3.4 Language

While Dhivehi is the national language, and legal and official correspondences are conducted in Dhivehi, English is used as the primary medium of teaching throughout the educational system. Dhivehi is the only local language spoken in the country, with slight dialectical differences in some atolls and major differences in the southern four atolls. The Dhivehi language is spoken only in the Maldives and on the island of Minicoy, in neighbouring India,

[5] LDCs are countries which according to the Economic and Social Council of United Nations exhibit the lowest indicators of socioeconomic development, with the lowest Human Development Index ratings of all countries in the world. In identification of the LDCs in its triennial review of 2003, the Committee for Development Policy proposed the following three criteria: low-income (three-year average GNI per capita of less than US $750, which must exceed $900 to leave the list); human resource weakness (based on indicators of nutrition, health, education and adult literacy) and; economic vulnerability (based on instability of agricultural production, instability of exports of goods and services, economic importance of non-traditional activities, merchandise export concentration, and handicap of economic smallness, and the percentage of population displaced by natural disasters) (United Nations, nd).

[6] A developing country has a relatively low standard of living, an undeveloped industrial base, and a moderate to low Human Development Index (HDI) score (United Nations, nd).

where it is known as Mahl (Fritz, 2002). Linguistic evidence shows a close relationship between Dhivehi and Sinhala (Cain, 2000 cited in Mohamed, 2006b) while many languages have influenced the development of Dhivehi through the ages, most markedly Arabic (Wijesundera, Wijayawardhana, Disanayaka, Maniku & Luthufee, 1988). The language is written in *Thaana* script which is written from right to left with the diacritical marks of Arabic language.

Other significant languages for the Maldivian community appear to be Hindi and Arabic. As Hockly (1935) stated in his study based on his time spent in the Maldives during the late 1920s, "practically all the Maldivian officials are conversant with Hindustani and all those whom I met spoke it quite fluently" (p. 90). Hindi movies and dramas have remained favourite entertainment sources for the public. Hockly's (1935) study further states that Arabic reading and writing was widespread as it was taught in the schools and mosques. The historical provenance of Arabic is also seen in the Tarikh (the official chronicle of the Sultans) appearing in Arabic (Hockly, 1935).

3.5 Education

Historical accounts show that education has been a priority in the Maldives, even in ancient times. The following excerpt from a 1616 record by Pyrard (cited in Gray 1887) is noteworthy:

> All work together in teaching the people the law of Mahomet, and especially the moudins (people appointed as religious leaders for public prayers), who teach the children to read and write the language of the country, and that of Arabia (p. 127).

The first formal schools were opened in 1924 and served as Quranic schools; and during the 1930s basic primary schools that concentrated on teaching Dhivehi literacy and the rudiments of arithmetic in addition to the Quran were introduced on several islands (Ministry of Education, 1999). The western system of schooling began in 1960 in Malé and in 1961 English medium education was initiated in Malé schools (Education Masterplan, 1996 cited in Mohamed, 2006a, p. 9), and it was later adopted in other island schools. "As a result, today the majority of Maldivians can understand some basic English, while many can speak it fluently" (Mohamed, 2006a, p. 9). Universal access to education was reached in 2000 (UNESCO, 2007). One of the strengths of Maldives as identified in a recent ADB (2007) report is its "reasonably good primary and secondary education and English language skills" (p. 26).

Conversely, while the younger generation of the Maldives enjoy a relatively good education system, the older, especially those born prior to the 1950s, would have had a very traditional

form of formal schooling, if any at all. Today, primary education (Grades 1-7) is available on all inhabited islands with lower secondary (Grades 8-10) and higher secondary (Grades 11-12) schools located strategically throughout the atolls. However, there appear to be vast differences between Malé and other atolls in terms of the quality of teaching and access to adequate facilities like libraries and laboratories (Ministry of Education, 1999). These factors have implications for the information gap between the rural and urban population as well as between the older and younger generations.

Further disparity has evolved due to the limitations in tertiary education which for the most part is limited to the capital island Malé. Tertiary education is provided by the Maldives College of Higher Education (MCHE), and a number of small-scale private learning centres. These tertiary education providers offer certificate programs and diploma programs with a few recently introduced degree programs.

3.6 Literacy

The country boasts a literacy level, in the local language, of 98% for both male and female (MPND, 2005). Moreover, there is virtually no difference between the literary rates for Malé and the outer islands. According to Maniku (1995) the literacy rate has been high in the Maldives even historically and he deduces that this indicates that the Maldives has had a reading culture for some considerable time. However, as Razee (2007) cautions, this high literacy rate should be scrutinized as a person is considered literate based on their ability to read and write their name. This does not translate well in terms of functional literacy or numeracy skills.

3.7 Religion and learning

Even though little is known about the Maldives prior to embracing of Islam, the historical records prove that the country was inhabited by Buddhist people, and it is also believed that Hinduism was practiced at some ancient period (Mohamed, 2006b). Islam was adopted in 1153 and has been the only religion practiced since then.

The Islamic tradition groups knowledge into two categories: the knowledge rendered by Allah in the Quran and knowledge acquired by humans via rational inquiry (Muhammad & Muhammad, 2003). Mosques have played an important part in Muslim communities and the case is no different in the Maldivian literary spectrum. Francois Pyrard in his writings (1619, cited in Abdullah & O'Shea, 2004, p. 135) describes the presence of "engraved letters and inscriptions in the Arabic language" in mosques. The mosques have been, and are, a central building on all of the inhabited islands of the Maldives. The historical accounts of the

Maldives also show the vigilance of the Maldivian community in acquiring the first category of knowledge through the Quran (Phadnis & Luithui, 1985).

The Quran is taught as a section of Islam, as one subject among many other subjects within the modern Maldives school curriculum. The formal schooling system does not seem to be adequately taking up the role of the traditional Quranic schools. This is evidenced by the popularity of private semi-formal Quran classes throughout the country. An interesting point to note here is the context of Arabic learning which is mostly based on reading and writing skills (Hockly, 1949).

The awareness or the level of observance paid to the attainment of the second category of knowledge, that is rational inquiry based on experience and observation, is questionable. The present modern school curriculum does provide a high level of education preparing students to sit for the London General Certificate of Education at Ordinary and Advance Level. However, there is criticism that it is very much based on rote learning and targeted at results based on memorization rather than on the development of critical thinking and inquiry; a prominent blogger in the Maldivian blogosphere (Hilmy, 2007) writes:

> Our educational system has principally rewarded those who have developed their ability to swallow information and regurgitate it during a prescribed time frame (np.).

3.8 Oral tradition and culture of learning

The Maldives has followed an oral tradition of information sharing from time immemorial. It certainly lacks, or has a meagre amount of, written records of an historical nature. The limited published historical accounts of the Maldives are from outsiders based on their voyages to the Maldives, such as those by François Pyrard and HCP Bell and "the first slightly long and relatively comprehensive account is that of Ibn Batuta in the 14th century" (Phadnis & Luithui, 1985, p. 93).

The orality of knowledge transfer can be seen from François Pyrard's accounts in Maldives during 1602-1605 (Gray, 1887) which describe the perfect precision in which the local sea vessel (called *Dhoani*) was made by the locals using local material. The practice a still ongoing and the knowledge is transferred from person to person. It is interesting to note the commentary by the captain of S.S. Consett, wrecked in Suadiva atoll in 1880 where he describes the people as "not ignorant, having books in their own language, and carrying on manufactures of coir yarn and rope, fish rush mats, fans, and tatties. The children are taught to read…" (cited in Gray, 1887, p. 106). Another extract by Pyrard (cited in Gray, 1887) that is noteworthy is:

> In short, the people are exceeding adroit, much given to the manufacture of all kinds of things, and excelling therein, even in letters and science, according to their notions; but more especially in astrology, of which they make great business. They are prudent and circumspect people, very cunning in trade and in social life (p. 106).

To some extent Maloney (1980) supports this. The description given in his ethnographic study of the Maldives, states that the people were very conservative. He attributes this to the lack of stimulations for children in their growing years due to closed societies, negative attitudes towards child's play and the lack of ventures to experiment creatively.

> The child is confined up to its teen years on a small island maybe half a mile long, perhaps with enervating social relationships, and no real schooling. There are no children's organisations and entertainment, nor even much in the way of children's stories (Maloney, 1980, p. 361).

This can be said to hold true in the present day, especially in the rural islands, given the small population base and also insufficient local literature. There are only a few local stories and even fewer that are in printed form. As explained by Maloney (1980), "when Maldivians are asked if they know any old stories, the most common response is a blank" (p. 159). *Dhon Hiyala and Ali Fulhu* is the most popular tale in the Maldives that has been told for centuries (Abdullah & O'Shea, 2004; Maloney, 1980; Romero-Frias, 1999). A few similar stories have been published in Dhivehi. However, the originality and some cultural aspects of the stories have been lost partly due to the oral tradition.

Dhon Hiyala and Alif Fulhu, translated into English by Abdullah & O'Shea (2004), tells the story of how women played a major role in the household, the role of astrology in day-to-day activities, the Islamic traditions that were followed, and the education system at that time. This tale demonstrates the importance and predominance of Quranic teaching to the young in their first 10 years and the role of the parents in educating their children to read and write.

The orality of the Maldives culture is also evident in the use of traditional medicine. Prior to the introduction of western medicine during the 1950s, indigenous medicine, known as *Dhivehi-beys*, which uses mainly plant extracts, was used for cures for all ailments. Although there is no information regarding the origin of *Dhivehi-beys*, it is believed that Chinese medicine, as well as the Unani School of Medicine as practiced by the Hakeems of the subcontinent, formed a major part of it (Ministry of Communication Science & Technology (MCST), 2002). The following observation is particularly noteworthy:

> Knowledge of traditional medicine has normally been handed down from father or mother to a selected daughter/son or passed on to a favourite assistant through apprenticeship. These people learn the practices through observation of the great masters at work… The great masters of traditional medicine did not document their remedies and none of the remedies has been

> scientifically broken down into formulas that others can make and that could have the same effect. At the same time, there are no organized schools of traditional medicine where students can follow a formal course of instruction (p. 21).

Another form of knowledge or way of dealing with the unknown is the use of *fanditha* (a form of sorcery). This was widely used and still is used as the answer to all unknown and unexplained things that happen to the individual or the community[7] (Romero-Frias, 1999). As Maloney (1980) states, *fanditha* has a "great importance to individual perception of the world and to psychological adjustment with the environment" (p. ix).

> "*Fanditha* men 'cure' people of all kinds of sickness, make the crops grow, make the fish get caught, cause a neighbour to give up his wife, create love, cure barrenness or tell auspicious times and places… and help success in new business" (Maloney, 1980, p. 244).

3.9 Mass media

Radio has been the oldest form of communication within the islands and it is universal. The radio and TV channels are state-owned. There has been an emergence of privately owned radio and TV channels during 2007. However, Voice of Maldives (VoM) and Television Maldives (TVM) remain the main broadcasters. People on the remote islands today listen to radio regularly and work is underway to universalise television (Sodiq, 2001 cited in Shareef & Kinshuk, 2005).

Newspapers have been in existence for some time with the first daily in 1956. The three current prominent newspapers, all in the local language with a page or two in English, have been in existence for three decades (Bhatia & Baumgardner, 2008). Newspapers are widely available in Malé. Their availability on other islands is not simultaneous or timely due to the difficulties in transport as well as lack of proper inter-country postal services in the Maldives[8]. To overcome the problem of dissemination of news to the rural areas, all the newspaper headlines, with a brief outline of the coverage, are broadcast on the national radio, VoM.

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[7] The recent occurrences in island of Makunudhoo in the Makunudhoo School during May 2008, highlights how prominent this is even today. "The mystics have also confirmed that the illness is caused by a jinni (a supernatural being) that lives in the school … The reasoning is that all those who fall sick are at the school when it happens and it's always at the same time. And no matter how far apart the victims are, they keep calling out to each other." http://www.haveeru.com.mv/english/?page=details&id=22692.

[8] The Maldives Post has been in existence for 101 years and yet people have to rely on friends or fellow island people to deliver letters or small packages within the country. In recent years things have started to look more positive, probably with the introduction of regular and semi-regular transport infrastructure to some of the atolls. According to the information on Maldives Post website (http://maldivespost.com) five post office branches (sub-post offices) were opened in December 2007. They are located in *Sh. Funadhoo*, *Lh. Naifaru*, *Aa. Rashoo*, *Dh. Kuda Huvadhoo*, and *Ga. Villingili*. With these five new additions, the Maldives now has thirteen sub-post offices on thirteen different atolls.

3.10 Research and development and indigenous knowledge

The Maldives does not appear to have organised scholarly communication and does not publish scholarly journals. There exist only a few scholarly works on the Maldives, its origin, culture and settlement. Prior to 1980 there existed only three sources that provided references to trace the evolution of the culture of the Maldives: the account of Francois Pyrard who was shipwrecked and detained on Malé for five and half years; the work by Young and Christopher in the 1930s when they were deputed to the Maldives as part of a marine survey team; and H.C.P. Bell's book on the Maldives based on his experiences when he was shipwrecked there and his subsequent visits in 1920 and 1922, deputed by the Ceylonese government to study Maldivian Buddhist antiquities (Maloney, 1980).

According to the National Bibliography of Maldives (National Library, 1995), the average annual local publication during 1990-1995 was approximately 66 items, of which 23% were in English and approximately 80% of all were government publications. It should be noted that the national bibliography published in 1995, was the first, and its subsequent publication has been infrequent and irregular. The recent passing of the legal deposit law, in mid-2005, should now facilitate this endeavour.

The National Centre for Linguistic and Historical Research (NCLHR) is mandated to collect, and produce historical research, protect historical sights, and preserve and develop the Dhivehi language and has published a number of books on local literature and history. There appears to be a vast gap in the capture of traditional knowledge which has been transmitted verbally from time immemorial. The prominent areas of indigenous knowledge appear to be in traditional medicine, Maldivian coir ropes and Maldivian lacquer work (Hockly, 1949). Little literature is available on these.

The low level of local publication can partly be attributed to censorship of publications, which is common in the Maldives. The government actively imposes censorship on anti-Islamic material as well as defamatory material of a general nature or those that may jeopardise the peace and harmony of the country (O'Shea, 2003). Consequently self-censorship is widely practiced by writers to conform to the government censorship regulations (BDHRL, 2008).

In the *Maidhu* newspaper, about the incidence of the government banning of a book titled *Iyye* (meaning yesterday) on historical leaders, Rasheed (1997 cited in O'Shea, 2003) writes:

> In a small society like the Maldives, such malicious attacks as found in the book can only undermine social harmony and stability that we cherish and need so much in order to sustain national development (np.).

The advent of the WWW has been a promising development for countries like the Maldives as it promotes easy exchange of information and facilitates self publishing. This also has implications for the censorship policy of material as the boundaries and limits of censorship blur on the Internet. For instance, the book mentioned earlier with its controversial historical material, banned in the Maldives, and pulled from the bookshops, is now available for people to read on the web.

Blocking of websites considered anti-government has been common in recent years. As a result, the Maldives was listed among the Internet black holes[9] by Reporters Sans Frontières in 2005 but was removed from this list in 2006 based on changes in the practice (Reporters Sans Frontières, 2006). However, to date, it seems there is one major website that is blocked (Nasheed[10], 2008).

> The decision to block *Dhivehi Observer* has caused Maldives to be included within those countries which censor the net and restrict free expression. The country is blacklisted for an act that has yielded no concrete benefit… Therefore, let's ban all websites using foul language, irrespective of their political association or affection. Or let's open up all websites in spite of their foul language, and irrespective of their political association or affection (np.).

3.11 ICTs

The Maldives telecommunications industry was a monopoly until 2004, with *Dhiraagu* being the sole provider. The government owns a 55% share of the company. Additional service providers have been allowed in the past few years and at present there are two Internet service providers (*Dhiraagu* and *Focus Info Com*) and two mobile phone services (*Dhiraagu* and *Wataniya*). Land line is provided by *Dhiraagu* alone. A recent summary of communication services provided in the Maldives is shown in Table 3.1 below.

Communications				units per 1,000
Medium	date	unit	number	persons
Daily newspapers	1996	circulation	5000	19
Radio	2000	recievers	29000	109
Television	2000	recievers	10000	40
Telephones	2005	main lines	31900	109
Cellular telephones	2005	subscribers	129100	439
Personal computers	2004	units	36000	124
Internet	2004	users	19000	66

Table 3.1: Communications snapshot of the Maldives (Britannica World Data, 2006)

[9] Reporters Sans Frontières identified these countries as Internet black holes to represent countries that limit or prohibit their citizen's access to the Internet as a way of censoring the free flow of information. (http://strangemaps.wordpress.com/2007/08/31/170-a-map-of-the-internets-black-holes)

[10] Mohamed Nasheed, the Minister for Legal Reform, Information and Arts interacted with the public through his private blog: http://www.mnasheed.com/2008/05/of_internet_censorship_offensi.php

Public telephone services were introduced in Malé, in 1968, but it was not until 1999 that telephone services reached all inhabited islands (MCST, 2002). Mobile telephone coverage for the entire country was provided by *Wataniya* in 2008. The total number of telephone lines (including payphones) in the country is 32,513 with 73% of these on Malé and 23% on other islands, and 4% on the resorts and other uninhabited islands (Telecommunications Authority of Maldives (TAM), 2007).

The uptake of mobile telephone, computers and the Internet is swift in the Maldives, especially in Malé, where computers as well as mobile telephony are "becoming a part of life" (Ahmed, 2004, p. 3). The Internet was introduced in the Maldives in 1996 and now Internet access is available to all the islands mainly in the form of dialup, while broadband is common in Malé (Ahmed, 2004).

The price of Internet access is much higher than it is in developed countries and many developing countries (ADB, 2001 cited in Shareef & Kinshuk, 2005, p. [9]). According to Ahmed (2004), in the urban area where there is access, the issues are with the high cost and slow speed of the Internet access while, in the rural areas, the issue is the means to access.

In the same way as many other comparable developing countries, the Maldives is experiencing the digital divide, where the people on the capital island, Malé, have access to and skills in the use of ICTs, albeit limited, and those on the outer islands have much more confined access or no access at all. To narrow this gap, the government has taken initiatives in the formation of information technology (IT) and ICT policies (Rasheed, 2004), as well as telecommunication policy, with a view to linking its dispersed communities (TAM, 2006). Additionally, there are plans to establish multipurpose community telecentres in the island communities (National Centre for Information Technology, 2007).

ICT use is common in the education system with all the schools in Malé and some schools in the islands equipped with computer laboratories. This ensures that the young generation of the Maldives is IT literate. ICT diffusion[11] in the Maldives is high compared to other similar developing nations. A United Nations (2005) report categorised the Maldives at 50th place in its ICT diffusion listing of 165 countries.

The uptake and adoption of ICTs can also be seen in the emergence of Maldivian blogs. As at October 7, 2007, there were 933 blogs registered in the mvblogosphere[12] and this figure

[11] The Index of ICT Diffusion is designed to evaluate ICT development using indicators of ICT diffusion across countries. It measures the average achievements in a country in two dimensions: connectivity and access (United Nations, 2005)

[12] Mvblogosphere, http://www.mvblogs.org, is a compilation of blogs by Maldivians with the aim to track and map the growth in Maldivian blogs and their content.

had risen to 1548 by mid November 2008, and it is believed there would be many more which are not registered. These blogs range from personal interest issues to social, cultural, political and economic developmental issues and have resulted in discussion about issues that earlier would not have been discussed in the open.

3.12 Library and Information Services

The library system in the Maldives is still in a state of development. As with any other infrastructural services in Maldives, the main libraries are located in Malé with only a very few government and privately owned libraries on the outer islands and these are mostly in schools. Most of the operations in the existing libraries are manual with only a recent introduction of integrated library software in the MCHE libraries in 2006. Inadequate finance, the shortage of qualified library staff, and the poor professional status of library staff, are the major constraints on the growth, development, proper management and functioning of libraries in the Maldives (Gross & Riyaz, 2003).

The National Library of Maldives, located in Malé, is the largest and oldest library in the country with a history of 60 years. Contrary to its name, the Library has a dual role as a public library. Due to popular demand and space issues, the children's collection within the National Library was moved in 2005 to a separate building in Malé and renamed *Children's Multimedia Library* (Habeeb, 2006).

The other major library in Maldives is the MCHE library with a collection of 60,000 volumes and it is made up of five branch libraries. Other noteworthy library collections include the Law Library with approximately 1,700 books and the Indhira Gandhi Memorial Hospital library with 2,383 books (Habeeb, 2006). There are also 75 private libraries on various islands registered at the National Library (National Library, 2007). The country has 16 school libraries located on Malé and 63 school libraries on the islands (Habeeb, 2006). This signifies that over 125 islands do not have access to even a school library.

In addition to MCHE, the Maldives has several tertiary education providers offering diploma and degree programs. However, it is alarming that these institutes do not have the capacity, financially as well as in terms of physical space, to provide reading and research material other than the lecture notes (Ministry of Information and Arts (MoIA), 2007a). Even in places like MCHE with an adequate budget, the high cost of journal and database subscriptions presents considerable challenges in securing access to academic or research literature (Gross & Riyaz, 2003).

The following comment by an individual, in response to a blog entry in the official blog of Maldives Information Ministry, in relation to the provision of academic reading material in the NL, is noteworthy (MoIA, 2007a):

> Someone last year, to make a comparison among others, pointed out that in the National Library, we have President Gayoom's 184 books while there was just one book by Plato. Sadder still, it was pointed out there were no works by, say, Aristotle, Rousseau, Kant, Hegel, or even important contemporary thinkers such as Habermas. Do they have works by important (given our desire for a liberal democracy) contemporary Muslim scholars such as Abdullahi Ahmed An-Nai'm? This lack, to my mind, is inexcusable... It's difficult here to talk about matters of priority in the context of limited resources. Perhaps, the lack of such areas is justified by the alleged greater urgency of other subjects. But, especially given our socio-political problems, such subjects are of absolute importance (np.).

The National Library is also the sole organisation providing library training. This is offered at a very basic level and infrequently. The difficulty of this endeavour in its first ten years of training since 1986 was attributed to lack of monitoring and follow-up action (Diyasena, 1995). Since then, the National Library and the Maldives Library Association in collaboration with the Sri Lanka Library Association have facilitated a diploma program in Information and Library Studies. The program, conducted as a three-year program, lasted from 1995 to 2003 with only five participants graduating with a Diploma by the end of the program (Gross and Riyaz, 2003). This highlights the difficulties in conducting training in an area where the country lacks adequate qualified human resources and also experiences professional isolation due to its geographical location.

3.13 Information policies and standards

The country is taking measures, within its capacity and with help from international aid agencies, to keep pace with international development in the information sector.

The passing of the Legal Deposit Law in mid-2005, which came about after 15 years of lobbying (Habeeb, 2006), supports the collection of all national publications published within the country as well as those published in other countries by Maldivians. Clause 12 of the legislation requires retrospective editions and publications to be deposited in accordance with this law.

The Maldives, as of yet, does not have a Freedom of Information Act or a copyright law. A Freedom of Information Bill has been under discussion for the past few years and in the absence of a copyright law, copyright and intellectual property rights of local content are

adhered to by the National Bureau of Classification[13] which formally records the ownership of a particular piece of intellectual property including books and lyrics.

3.14 Summary

The facts presented above indicate that the Maldives has a positive outlook on information with its high literacy rate, commitment to education and learning as well as the uptake of ICTs. However, it is not clear how information literate the people are since the literacy rate recorded is not based on functional literacy. It will also be interesting to study the prevailing information culture among the adult population of Maldives and compare the findings from the rural versus urban community. These questions form part of the background to the research undertaken for this thesis. The methodology is described in the next chapter, Chapter 4.

[13] Work carried out at the National Bureau of Classification (2006).

1. Censoring, classification into categories and grading of movies that are produced in the Maldives and movies that are imported in to the Maldives and withholding movies that are prohibited as per the law.
2. Viewing and assessing artistic presentations that are produced or prepared for public presentation prior to their being presented.
3. Registering original tunes and songs produced in the Maldives and registering songs produced in the Maldives which are presented to the public.
4. Registering books that are issued in the Maldives.

Chapter 4: Research Design

The basis of this study is to explore the issues arising from a perceived difference in the level of access to and attitudes towards information in the developing island state of the Maldives. The provision of information as a prerequisite to successful national and economic development has been verified in the literature review in Chapter 2. This chapter, Chapter 4, outlines the research questions and the objectives of this study and explains how the researcher is proposing to address these.

4.1 Aims and objectives

The aim of this study is to explore the relationship between information culture and development, and to highlight areas in information provision and access that need to be addressed in the Maldives. The research questions for this study are:

1) How effective are the existing and planned information initiatives in place in the Maldives? and
2) What changes are required in the information culture of the country to lead to development?

The specific objectives of this study are to:

1. define and evaluate the present information culture of the Maldives;
2. investigate the relevant information initiatives in place;
3. investigate the relevant information initiatives planned;
4. identify the information needs of the people of the Maldives;
5. identify the challenges associated with the implementation of information services; and
6. draw up recommendations for the future direction of information initiatives.

4.2 Methodology

This study can be considered as applied research as it envisages studying a social phenomenon, which is the existing information culture in the study locale. As Kumar (2005) states, unlike the pure research conducted in scientific studies, "most of the research undertaken in the social sciences is applied, the findings being designed either for use in understanding a phenomenon/issue or to bring change in a program/situation" (p. 14).

Kumar (2005) also asserts that a research study can be carried out with four objectives: descriptive, correlational, explanatory, and exploratory with any given research being more

inclined to one of these objectives. Accordingly, this study can be classified as descriptive as well as an exploratory research project as it attempts to describe the Maldives' information culture by investigating the situation that currently exists. There do not appear to be any similar studies and there is little literature on the Maldives.

It is generally believed that social research, since this field of study is concerned with the behaviour patterns or interaction of human, is not quantifiable – that it is subjective. The subjective-objective research paradigm or the qualitative versus quantitative methods is an important dichotomy to consider in conducting any research as both paradigms have their advantages and disadvantages (Slater, 1990).

Quantitative research often employs a questionnaire to gather data. A questionnaire provides a set of questions with pre-determined answers to choose from. To design the research instrument, the researcher needs to be aware of the nature of the phenomenon under review (Slater, 1990). As Slater further specifies, in such situations, qualitative methods can help clarify the research situation at hand. Qualitative research is mainly linked with in-depth interviews and group discussions. It is "committed to see through the eyes of one's subjects" (Bryman, 1984, p. 78).

There is a wide array of research methods on both paradigms to choose from, and Moore (1990) and many other researchers have identified that it is often useful to employ more than one method. Creswell & Clark (2007) explain:

> Mixed methods research is a research design with philosophical assumptions as well as methods of inquiry. As a methodology, it involves philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative approaches in many phases in the research process. As a method, it focuses on collecting, analysing, and mixing both quantitative and qualitative data in a single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone (p. 5).

Accordingly, a mixed method approach has been selected for this study to retain the internal and external validity of the research as well as for the purpose of triangulation. "Internal validity is the extent to which its design and the data that it yields allow the researcher to draw accurate conclusions about cause-and-effect ... within the data" (Leedy & Ormrod, 2001, p.103-4), and the external validity is the extent to which the results can be generalised and theory used in other similar contexts (Leedy & Ormrod, 2001; Guba & Lincoln, 1998).

This multi-method research approach will also lead to triangulation as mixed methods help "to obtain different but complementary data on the same topic" (Morse, 1991, p. 122) to best

understand the research problem. Research rigor can be established through triangulation of the study with the help of a variety of data, involvement of multiple researchers and/or evaluators, use of multiple theories, and using multiple methods of study (Saule, 2000).

4.3 Research methods

The specific research methods employed in this study include the document analysis, a survey questionnaire, and in-depth interviews. These are now outlined from conceptualisation to implementation.

4.3.1 Literature review and document analysis

The relevant literature on the research area was studied to contextualise the topic. Furthermore, the Maldives culture in general, and the information culture in particular, was studied based on the available documents. This portion has been presented as the background chapter, Chapter 3. This enables a better contextual understanding of the results of the survey and the interviews.

As explained by Marshall & Rossman (2006), the use of documents as a research method is usually employed to quantify the meaning of the contents. Furthermore, Marshall & Rossman (2006) report that the validity of the analysis is explicit to the reader; "information can therefore be checked" (p. 108).

4.3.2 Survey

The bulk of the field work for this study consisted of a survey. The aim of this survey was to identify the information use, information needs, information access, and the level of information literacy of the Maldivian community.

The ideal scenario might be to approach the population as a whole and identify their information needs and information use, which would give a very accurate picture of situation for the whole population. However, as this would be an almost impossible task and not the most efficient way to attain this information given the time, financial and researcher constraints, a sample survey was considered more appropriate. This could then be generalised to the whole population. As Warwick & Lininger (1975 cited in Bryman, 1984) state:

> the sample survey is an appropriate and useful means of gathering information under three conditions; when the goals of the research call for quantitative data, when the information sought is reasonably specific and familiar to the respondents, and when the researcher himself has considerable prior knowledge of particular problems and the range of responses likely to emerge (p. 80).

Basic survey designs include cross-sectional surveys and longitudinal surveys. If the aim is "single-time description, then a cross-sectional survey is probably the most appropriate design" (Babbie, 1990, p. 62).The cross-sectional design is "best suited to studies aimed at finding out the prevalence of a phenomenon, situation, problem, attitude or issue, by taking a cross-section of the population" (Kumar, 2005, p. 93). Since the primary aim of this research is to study the current information culture, it employs a cross-sectional survey design with parallel samples. Parallel samples were taken from two communities to identify differences, if any, between the information culture of the rural and the urban population.

"Survey instruments take four forms: self-administrative questionnaire, interview, structured record review, and structured observation" (Fink, 2003, p. 22). The advantages of using a questionnaire, as summarised by Busha & Harter (1980), include: the wide range of distribution; opportunity for respondents to give frank answers, as it is anonymous; greater economy of effort, as a questionnaire collects large amounts of data in a short period of time; and minimisation of variables, as the questions are fixed, which reduces the misinterpretation of what is asked. They specify that questionnaire surveys are positively received by respondents if they can be done at their leisure, within a given time frame.

Sampling

In identifying target groups for the survey, two levels of sampling were utilised. The first was the purposeful selection of two target groups, one a rural community and the other an urban community. The second stage was the recruitment of participants from both communities.

"Sampling theory is guided by two principles: the avoidance of bias in the selection of a sample, and the attainment of maximum precision for a given outlay of resource" (Kumar, 2005, p. 23). Taking these two principles into consideration, it could be said that the first step of the sample selection for this study, which was selecting a rural island, has its biases. However, it can also be argued that this purposeful selection provided for the second principle above, as this selection was made purposefully to get precision, given the limitation of resources and time.

The purposeful approach "entails making a judgement regarding which units to include in a study" (Beck and Manuel, 2008, p. 49). With a probability or a random sample, each element of the population, in this case all of the rural islands would have an equal independent chance of being included in the sample. Consequently, the sample would be representative of the population (Williamson, 2002). However, in the case of the 195 rural islands of the Maldives it was feared that it would be less representative if a random sample ended up in a

non-representative unit, like a small island of 100 or less people or a large island of 9000 people. Hence, the islands were grouped into size classes to identify the most representative group. This breakdown is shown in Table 4.1 below.

Island-size group	# of islands in the size class	Total population	% of population	% of rural population
Less than 500	75	25,616	8.85%	13.69%
500 - 999	58	40,343	13.94%	21.56%
1,000 - 1,999	47	64,059	22.13%	34.24%
2,000 - 4,999	12	32,975	11.39%	17.63%
5,000 - 9,999	3	24,099	8.33%	12.88%
10,000 + (Malé)	1	102,377	35.37%	
Total	**196**	**289,469**		

Table 4.1: Island-size breakdown (Source: Maldives Statistical Yearbook 2006)

Based on this information, it was decided to choose an island from the 1000-1999 sized class as it is comparatively representative given that this size group contains 34% of the rural population. From these 47 islands, islands were deleted if they were too far for travelling. Similarly, islands that were too close to the urban capital, Malé, were also omitted as it would not be possible to generalise the results since their situation would be different to the majority of the islands.

This left 24 islands from which Thulhadhoo[14] island was selected as the target rural island, based partly on convenience due to its reasonable proximity to Malé as well as similarity in dialect. Transport access to Thulhaadhoo is easier than most other inhabited islands because of a semi-regular weekend ferry service and speedboat accessibility. More importantly, it shares common features with other small rural islands, in that it is small with a population base of 1,759, which is mainly reliant on fishing and tourism-related work as the main economic activities. The island is not an atoll capital[15] and is not close enough to Malé for regular commuting. Hence, developmentally, it has more in common with the majority of the islands. As for an urban island selection, Malé[16] was the only choice, as it is the only island community that is considered urban.

In the recruitment of participants from the selected communities, a stratified random sampling approach was utilised. In stratified sampling, the target group is first divided into categories, in this case gender, to get a representative balance. It was feared that, without any stratification of this sort, the survey would predominantly include female participants, and end up as a non-representative sample of the population. It was anticipated that in the rural community, men would not usually be home during the day, as most of them would be out fishing or working on tourist islands and not returning to the home island for weeks or

[14] Thulhaadhoo is an island in Maalhosmadulu Dhekunuburi (*Baa Atoll*). A map of the Island is at Appendix 2.
[15] The Maldives is divided into 20 administrative districts (atolls) mainly based on the geographical atoll formation. Each atoll has an island designated as the atoll capital.
[16] A map of this study locality is at Appendix 3.

months. It was also anticipated that, even in the capital island, Malé, men would be harder to recruit.

Busha & Harter (1980) state that stratification in terms of subgroups within a homogenous population, for instance gender, should only be considered if there is sufficient reason to believe that the responses of subgroups might differ. This is applicable for this study as it is on a cultural issue and based on the gendered roles in the community that there might be differences in the level of access to information or even awareness of information venues.

The survey participants were selected systematically. In systematic sampling every n^{th} element from the target is selected (Williamson, 2002) and for this study, it was planned to approach every 5^{th} household. Johnson (2007), in her research in examining the role of social capital in information-seeking behaviour in Mongolia used an every-five apartment approach to recruit participants for her survey. In her study, the apartments were chosen from a selected building chosen on convenience based on the ease of transport and ease of access to the buildings.

Therefore, the sample selection of individual survey participants from both islands was based on a stratified systematic-random approach; selecting every five households on selected streets and then recruiting one male and one female above 18 years of age who consented to participate in the survey.

The age of above 18 was determined, primarily because it reduced the need for informed consent from a second party, namely parents. Secondly, the younger generation is at present in a modern educational system with every child having access to reasonable secondary education and presumably having a very different information culture from that of the adult population. The mixing of both the younger generation with the adult population in a small-scale study like this one was not likely to result in meaningful outcome. However, a comparison of these two groups would enable possible further research.

The sample size was set at 50 from each community. In determining the sample size for a survey, "the two key factors are the degree of accuracy we require for the sample and the extent to which there is variation in the population in regard to the key characteristics of the study" (de Vaus, 2002, p. 80). This translates into the level of confidence we could have in our generalisations with the given sample size. It is generally believed that the larger the sample size, the lower the sampling error and the greater the confidence level. However, as de Vaus (2002) further states, there are difficulties in determining an appropriate sample size as there are quite a few variables that needs to considered which also includes among other things, "a rough idea of how people are going to answer the question" (p. 81). Furthermore, "cost, time and access to respondents are also key factors" (p. 83).

The sample size of 50 from each community for this study was set because of time constraints as well as the belief that it would reach saturation close to that number given the small population base, especially on the rural island. Given the broad nature of the study, it was anticipated that the questionnaire would be considerably long resulting in a significant amount of data for analysis.

Research Instrument - the survey questionnaire

The questionnaire design was based partly on the implemented questionnaire by Iqbal (2004) in a similar study conducted in Bangladesh. A number of questions relating to the importance of information services with the satisfaction rating of the sources, was derived from Orna (1999). Extensive ideas were also taken from a study of information-seeking behaviour and information needs by Spink & Cole (2001a). Savolainen's (1995) study to identity everyday life information-seeking by Finnish citizens, and Bishop, Tidline, Shoemaker & Salela's (1999) study regarding information needs and the channels used to exchange information were also considered. Particularly relevant was the work of Curry & Moore (2003) from which questions like "I have access to the information I require to make decisions effectively" (p. 106) were used to formulate some of the questions in this study. Ginman's (1987) study of information culture and business performance was also taken into consideration, including the uses of internal, external, oral, and written information, the quantity of information used, and attitudes towards information. It was also important to identify the reading habits of the people outside school or work-related purposes (Raseroka, 2001).

Questions were included to identify the level of access and perceived lack of access to information by the communities and identification of the literacy as well as information literacy level of the participants. The literacy level is meant here as English literacy skills, since the high literacy rate of the country reported in official publications is not likely to add up to the necessary language literacy skills needed for meaningful access to the wide array of information on the Internet, since this is predominantly in the English language.

The questions were mostly closed, with a few open-ended questions. As de Vaus (2002) states, there are disadvantages of closed or 'forced-choice' questions in that people will have no choice but to choose possibly a vague answer if the range of answers is insufficient or the questions have not been well developed. The advantages of forced-choice questions include ease of coding the responses, easy administration by the participant, and also motivating participants to respond as it will not take too much of an effort on their part (de Vaus, 2002).

The closed questions followed the formats of "yes/no", categorical responses, and Likert scale responses. A check box was provided against each closed question. It was expected that the closed questions would reduce the time taken in answering and would increase the chance of people answering the same literal question without misinterpreting its meaning.

In addition to the pre-set answer lists to the structured questions, an "other" option was provided where relevant. This catered for any answers that did not fall within the provided optional answers (Slater, 1990). Moreover, the respondent's answer may have been slightly differently worded in which case the answer in the "other (please specify)" category could be interpreted by the researcher and added to the appropriate answer from the option list, if required, at the time of data entry for analysis.

The researcher did realise that the questionnaire was long and might not appeal to many respondents. Every effort was made to make the questionnaire as concise as possible without losing its focus. Moreover, given the number of skip questions based on the participant's individual circumstances, the number of questions that needed to be answered from the presented 60 questions was less, depending on the participants' situation. It was anticipated, based on the piloting of the questionnaire, that it would take 20-30 minutes to complete the questionnaire.

The English version of the survey questionnaire with the information sheet is attached as Appendix 4.

Piloting and refining

The questionnaire was pilot tested on a smaller number from the target community to check its applicability, usability and lucidity, and to identify any modifications needed to improve the questionnaire design. It was also important to prepare the questionnaire using concepts that would be familiar to the respondents so that the structured questionnaire was easy for people to complete and comprehend (Slater, 1990).

As the researcher was residing in Australia during the design of the research instruments, it was not practical to pilot the questionnaire in the target community. Therefore, the questionnaire was piloted among five people from the Maldivian community in Perth; three undergraduate students, a PhD student, and an adult who was accompanying a student. They were asked to complete the questionnaire imagining they were residing back in the Maldives - as some of the questions, like "do you have access to a public library" could be misinterpreted. The pilot specifically addressed the appropriateness of the questions to the situation in the Maldives, the usability of the questionnaire, the exhaustiveness of the

categories provided in the categorical closed questions, and an estimation of the time required for the questionnaire completion.

In addition to testing for the questions in general, and their structure and wording, there was a second stage of piloting required to test the translation. The piloted questionnaire described above was in the English language. The questionnaire was then translated into the local language, Dhivehi, by the researcher. Three of the previous participants were again asked to complete the questionnaire in this Dhivehi version to check the compatibility of both. It did bring to light minor grammatical issues and other minor modifications that were needed. One example was the changing of "retired" to "not working anymore because of old age" as there is no retirement in the Maldives.

An independent check on the reliability of the translation was also conducted with the help of a professional translator once the researcher was back in the Maldives for the data collection. It was believed that, since the pilot group had already completed the questionnaire in the English version, their understanding of the Dhivehi questionnaire would be preconceived, and they might have failed to identify flaws in the translation. The independent verification did not reveal any significant flaws in translation other than minor grammatical corrections.

At one point in the research design, it was thought worthwhile to provide the survey respondents with a choice of either English or Dhivehi version. This was based on pilot participants' recommendations and the researcher's personal experience in preferring to interact with English documents. However, given the probable different interpretation of both languages, however close it was in translation, it was believed that this could add ambiguity in the analysis of the data. Hence, to reduce the misinterpretation of questions, the Dhivehi version (included as Appendix 5) was used as it would be familiar to people of all ages.

Survey Administration

It was planned to conduct the survey face-to-face and that the survey form would be completed by the researcher. The drop-in model was selected because this in reality was the only available option given the lack of a postal system in the country. Houses do not have post boxes even in the urban capital Malé and the majority of the rural island does not have postal services at all.

The door-to-door approach does have advantages over a postal survey. It reduces the low-response rate associated with postal questionnaires, which is an important determinant, especially in a two-year research program. It also needs to be remembered that:

> not everyone who receives a questionnaire returns it, so there is a self-selecting bias. Those who return the questionnaire may have attitudes, attributes or motivations that are different from those who do not (Kumar, 2005, p. 130).

This is an important aspect given that the nature of the study is related to culture. Those who do not return a postal questionnaire might be the people whose views are most important in the survey. Hence, by recruiting participants from a door-to-door approach, people would be less likely to refuse to participate.

Limitations

Despite the many advantages of the survey questionnaire technique outlined at the beginning of this section, it has its shortcomings. As Busha & Harter (1980) outline: survey questionnaires preclude personal contact and do not allow respondents to qualify ambiguous questions; if the instrument does not arouse respondent emotions valid responses might not be elicited; poorly-worded or direct questions might arouse inhibitions on the part of respondents; and some respondents might be more likely than others to complete and return a survey questionnaire, hence there might be nonresponsive bias.

Furthermore, understanding and contextualising concepts presented as variables in the questionnaire may lead to misinterpretation (Kumar, 2005). Variables like gender, educational level, and occupation are pretty straight forward. However, variables like “are you computer literate?” or “are you competent in using the information sources available in the society?” are very subjective questions and understandably the uniformity as to its understanding among different people will vary.

Analysis

The survey questionnaire was designed with SPSS as the intended analysis tool, with the questions properly sequenced and the optional answers coded on the printed questionnaires. The results of the survey are presented in Chapter 5.

4.3.3 Semi-structured interviews

The third research component in the study was the semi-structured interviews with relevant information stakeholders in the Maldives. The information thus derived should complement the findings from the situation analysis and the responses to the community surveys.

The in-depth interview is a qualitative research tool conducted usually on a one-to-one basis and is a very flexible research method. It employs systematic observation, recording and documentation of information, and seeks understanding and interpretation of the information during the information gathering process, and is a very useful in getting detailed, rich, and

insightful data about a situation (Kumar, 2005; Kvale, 1996; Rubin & Rubin, 2005). As Kvale (1996) states, "the qualitative research interview attempts to understand the world from the subjects' points of view, to unfold the meaning of peoples' experiences" (p. 1)."

The research interview is similar to a daily life conversation, but it is a professional conversation in which the "researcher elicits depth and detail about the research topic by following up on answers given by the interviewee during the discussion" (Rubin & Rubin, 2005, p. 4). Kvale (1996) states that, even though conversation has remained an ancient form of obtaining knowledge, "systematic interview research is… a new phenomenon of the past decades" (p. 8). He further explains:

> technically, the qualitative research interview is semi structured: It is neither an open conversation nor a highly structured questionnaire. It is conducted according an interview guide that focuses on certain themes and that may include suggested questions. The interview is usually transcribed, and the written texts together with the tape recording are the material for the subsequent interpretation of meaning (p. 27).

Gorman & Clayton (2005) report that there are a number of advantages in using interviewing, including the immediacy of mutual exploration of the meaning of questions posed and answers received clarifying the concept under study, which in return warrants more accurate information.

Unlike a survey, in which exactly the same questions are asked to each individual, the qualitative interview is unique as researchers match their questions to what each interviewee knows and is willing to share (Rubin & Rubin, 2005). In this regard, interviews have the advantage of investigating causation, which can identify why individuals or organisations behave the way they do. Moreover, an interview can gather a large amount of rich data in a relatively short space of time.

The disadvantages include costly research time, possible uncritical analysis due to the subjectivity of the researcher and susceptibility to errors in interpretation, and being open to bias (interviewee and researcher) based on what both choose to reveal and choose to withhold (Gorman & Clayton, 2005).

Interviewing is relevant if the target group have a high profile as this will save them time, can be arranged at their convenience, and provide them privacy, which makes it a preferred method for these types of informants (Kumar, 2005, Kvale, 1996). It may be argued that the same information could have been gathered from the same group in a focus group setting. The focus group as a research method entails interviewing people as a group, which operates more like a group discussion, exploring their perceptions, experiences and understandings

with regard to a situation or event (Kumar, 2005). However, focus groups would need greater skills in keeping the discussion within the research focus, particularly if there are to be dominant people among the group. More importantly, the interviewees are selected from slightly different areas. Hence, the information sought should be different in each case, which means individual discussions are more appropriate.

It was hoped that the interviews with the key stakeholders in the Maldives' information sector would provide a greater understanding of the issue at hand, and help to evaluate the possible impacts of the particular policies or issues that came to light during the literature review and also the survey outcomes (even if not properly and fully analysed at the time of the interviews).

One of the main reasons for employing interviewing as a research method for this component of the study is to gain stakeholder support for the research and to promote the implementation of any positive outcomes from this research by educating the stakeholders of the researched situation. Moreover, by involving the key information stakeholders in the Maldives, it is possible to involve people with extensive knowledge or expertise in the information context, which adds value to the research. This is important due to the scarcity of relevant documented information on the Maldives.

Recruitment of interviewees

The interviewees were selected using a purposeful approach to address certain areas of information workers in the government. This approach is helpful, and is used within the social sciences, if the aim of the study is to obtain a variety of perspectives from different institutions (Beck and Manuel, 2008). Moreover, this exercise of participant selection was not to gather data for generalisation, but more as verification and to complement the information gathered from the document analysis. As Flick (2007) states, "sampling in qualitative research … is a way of managing diversity so that the variation and variety in the phenomenon under study can be captured in the empirical material as far as possible" (p. 27).

In this study, the researcher did not have the liberty to choose the exact people to interview, but identified organisations and let the organisation decide who should be included in the interview. It was assumed that each organisation would ensure that the highest authority was interviewed. The initial plan was to interview at least two officials from the Maldives:

- National Library[17],

[17] The Maldives National Library is located in Malé and it functions partly as the public library, with a small national collection located within the library. The National Library is also the only state-owned public library in the country.

- Ministry of Legal Reform, Information and Arts[18], and
- National Centre for Information Technology.

These would address the issues of library and information provision, the policy level issues in information provision, and the situation with the infrastructure of ICTs to the rural as well as urban communities.

Later, based on the document analysis, it was observed that it would be particularly important to interview personnel from the National Centre for Linguistic and Historical Research due to their role in the documentation of historical findings and involvement with local research. Due to the small size of this organisation it was decided to include only one person.

It was expected that a total of circa eight such interviews would take place. The interview numbers were restricted to this figure as it effectively covered the important stakeholders relevant to the phenomenon under study and, also, given the time frame and the scope of the project, it was envisaged that the number was sufficient and appropriate.

Interview guide

A semi-structured interview design was chosen for this study for the ease of conducting the interview. A fully structured-interview might have been too rigid and not flexible enough to cater for the slightly different work-backgrounds and areas covered in the selected interview participants (Rubin & Rubin, 2005). Equally, an unstructured interview style was not utilised as this might not have been effective and efficient, firstly because the researcher is a novice, secondly for the utilisation of the time effectively and thirdly to facilitate the comparison of the data across the interviews. The semi-structured nature of the interview also was important in catering for any 'new' questions that needed to be included based on the tentative outcomes of the rural and urban surveys as well as formulating questions spontaneously based on the substance of the conversation (Kumar, 2005).

The semi-structured interview guide was based on an already implemented structure by Iqbal (2004) in his research to study the information provision in Bangladesh. The interview structure was not piloted as it was very straight forward and for the most part, very flexible as to how the questions would be asked based on the specific interview. The interview guide is presented at Appendix 6.

[18] It was known as Ministry of Information and Arts at the initial stage of candidacy application and approval.

Implementation

As Rubin & Rubin (2005) caution, in conducting interviews, especially for a novice researcher, it is important to schedule the initial interview with someone with whom the researcher is familiar before interviewing a totally unknown person. Accordingly, it was planned to interview personnel from the National Library as the researcher is familiar with many of the senior staff in the library.

The recording of the interviews was considered very important for proper data capture and analysis. Recording facilitates for future analysis of the data with transcription and use of computer software like NVivo™. Recording also removes a source of potential distraction, and frees the interviewer to guide the interview, check that answers are complete and consistent, and plan future questions (Brenner, 1985). Moreover, it is considerably more difficult to keep the conversation in a normal flow with note taking as there is the possibility of incomplete observation and/or note taking (Rubin & Rubin, 2005). When detailed notes are taken the researcher tends to miss the non-verbal interaction that adds meaning to the spoken word. Furthermore, Rubin & Rubin (2005) state that detailed note-taking slows down the pace of the conversation as interviewees will tend to wait for the interviewer to finish writing before they continue with the conversation.

In spite of all the drawbacks, it was left up to the interviewee to consent to the recording without any pressure to reconsider their decision. It was felt that some interviewees would have issues with the recording given the sensitive nature of possible misuse of recorded interviews coupled with a sensitive political situation prevailing in the Maldives at the time.

Where consent was received, the audio recording would be conducted using a small Sony digital camera in the video mode. This reduces the likelihood of recorder failure, intrusive noises, as well as the obtrusive presence of the recorder, which are associated with conventional radio recording (Rubin & Rubin, 2005). The digital media also facilitates the transcription of the data as the digital file is usable on a computer.

Limitations

Since the semi-structured nature of the interviews does not involve listing all the specific questions, the comparability of questions asked and responses obtained may be a problem (Kumar, 2005). Moreover, as Kumar (2005) states:

> as the researcher gains experience during the interviews, the questions asked of respondents change; hence, the type of information obtained from those who are interviewed at the beginning may be markedly different from that obtained from those interviewed towards the end (p. 125).

The other disadvantage of interviews is the dependability of the quality of the interaction, which is related to the quality of the interviewer, and high probability of researcher/interviewer bias (Kumar, 2005). Researcher bias might come in the form of the type of questioning or in the documentation of the conversation, especially if it is not audio-recorded. Interviewee bias might occur in cases where the interviewee is not entirely honest about the responses or because the spontaneity of the conversation fails to address the questions fully.

Analysis

At the planning stage, it was envisaged that qualitative software like NVivo™ would be utilised in the analysis of the data. However, given the small number of interviews that were planned it was decided to analyse the data manually. The results of the interviews are presented in Chapter 6.

4.4 Ethical Issues

As highlighted by Kumar (2005), "harm to individuals, breaching confidentiality, using information improperly, and introducing bias" (p. 211) are unethical research practices. These were taken into consideration in the design and conduct of this research.

The approval of the Curtin University Human Ethics Research Committee was sought prior to data collection (included at Appendix 7). The process of applying for ethics clearance did bring to the forefront questions in the survey that might be considered sensitive by some people. One example was in trying to identify if people read newspapers, a question that included a list of a number of prominent newspaper titles including anti-government papers. The Maldives did not have anti-government newspapers until recently. It was realised later that this might alarm the participants into believing that the researcher was collecting politically inclined information as the data collection coincided with a politically fragile time in the country. Hence, this question was rephrased to reduce the likelihood of this happening.

In accordance with the Maldives' government regulations on surveys, the approval of the Ministry of Planning and National Development (MPND) was sought before conducting the rural and urban surveys. The permission was granted (included at Appendix 8) with minor recommendations relating to typing errors and phrasing, and one major recommendation to remove an ambiguous question from the questionnaire.

4.4.1 Ethical issues concerning research participants

The ethical issues relating to participants include collecting information, seeking consent, providing incentives, seeking sensitive information, the possibility of causing harm to participants, and maintaining confidentiality (Kumar, 2005).

The survey participants were given the opportunity to consent to their participation and were made aware that they may withdraw without prejudice at any point in the survey, in which case any information collected would be discarded. The survey questionnaire was presented with a covering letter requesting their consent (see Appendices 4 and 5), detailing the research issue and why it was important, and also stating that the research outcome might not be directly beneficial to the participant.

An official request letter was sent to the organisations to recruit interview participants in formal Dhivehi with the cover letter and information sheet for the interview in English language. These have been included at Appendix 9. The covering letter detailed that participation was voluntary and that the participant was able to withdraw without prejudice at any time of the interview process. The information sheet detailed the type of information that would be sought in the interview. The interviews were recorded only if the participants consented to it. A copy of the consent form is included at Appendix 10.

In terms of participant recruitment, it is acknowledged that the door-to-door method does put pressure on the people who answer the call. However, care was taken not to pressure them to participate. As detailed in the results chapter, a number of people did in fact refuse to participate.

The participants in the semi-structured interviews were a few selected government officials and they were identified by the organisation themselves without any kind of pressure on whom the researcher wanted to interview. It was made clear in the covering letter that they had every right to refuse participation at the organisational or individual level.

The researcher believes that neither the survey, nor the interview included information that might be considered too sensitive or invasive. Similarly, the researcher did not perceive any risk or harm to the participants in either the survey or the interviews. However, it was expected that some of the interview questions to government officials may have been likely to cause some political discomfort. Likewise, it was anticipated that there might have been animosity by prospective survey participants given the prevailing political situation in the country.

It was also assured that all personal information collected in this study would be kept confidential and that the data would only be used for the purposes of the research.

4.4.2 Ethical issues relating to the researcher

Ethical issues concerning the researcher include introducing bias, using an unacceptable research methodology, inaccurate reporting, and the inappropriate use of information (Kumar, 2005).

All efforts have been made to keep the researcher bias to a minimum, if ever present. It has been acknowledged that the purposeful selection of the rural island for the survey, and not taking a stricter random sample approach in identifying clusters in the urban area, might be considered as researcher bias. However, the decisions were made with valid reasoning given the context of the research.

Furthermore, the research methodology for this study has been critically evaluated and the researcher believes that this study employs appropriate methods of inquiry as well as reporting. As Kumar (2005) states "it is unethical to use a method or procedure you know to be inappropriate (e.g. selecting a highly biased sample, using invalid instrument or drawing wrong conclusions)" (p. 215).

4.5 Conclusion

Given the broad nature of the study and the different perspectives that were likely to come into play in determining the information culture (which included individual persons as well as organisations that deal with information), a mixed methods research approach was utilised. This multi-method research approach also enables triangulation as it seeks different but complementary data on the same topic.

The literature review includes evaluation of different information policies and policy initiatives in comparable countries to assess the worth of the initiatives for the Maldives. The situation analysis partly addresses objectives 1, 2, and 3 of this study. The survey addresses objective 4, and also contributes to objectives 1 and 5. The analysis of the interviews complements the situation analysis above, to contribute to objectives 1, 2, and 3. The outcome of the document analysis, survey, and interviews will highlight the areas that need to be addressed in the information infrastructure for national development efforts. This will answer objective 5 and also will be used to draw up recommendations which will address objective 6 of this study.

The following chapters present the results, discussion and conclusion and implications of this research outcome.

Chapter 5: Results – Survey

As detailed in Chapter 4, in order to understand the information culture in the Maldives as it currently exists, the research methods that were used for this study were a survey questionnaire of two Maldivian communities, and in-depth interviews of government officials. This chapter reports the data collected from the survey questionnaire.

5.1 Overview

The objectives of the survey were to identify the information use, information needs and the level of information access by the people of the Maldives with an emphasis on identifying differences, if any, between the rural and urban communities. As detailed in the previous chapter, it was planned to recruit 50 participants each from both the selected rural island, *Thulhaadhoo* (hereafter referred to as the rural community) in Baa Atoll and the urban capital *Malé* (hereafter referred to as the urban community).

The survey was conducted using a questionnaire in the local language, Dhivehi. Most of the questions in the survey were closed with categorical answers and the majority of the questions sought a single answer response. Provision was made in the questionnaire for "other" answers in the event that the respondents had a different answer from those provided in the categories. The questionnaire also carried six open-ended questions.

The questionnaire was divided into three parts with the first part covering demographic data, the second part being on access to information, and the third part on information needs and use (see Appendices 4 & 5). It was estimated that a participant would take 20 to 30 minutes to complete the questionnaire. It was also anticipated that respondents would be completing 50 of the 60 questions at most as the questionnaire was designed taking into consideration that all issues would not be applicable to everyone. One example of this was question 42:

Q. 42. Do you have access to a public library in your community?
☐1 Yes ☐2 I don't know (Please go to Q 47) ☐2 No (Please go to Q 47)

The respondent answering "I don't know" or "No" to Q42 would not then have to answer Q43 to Q46. There were 13 such questions in the questionnaire.

The survey was conducted in the rural community during December 2007 and in the urban community during January 2008. It took approximately 12-15 days in each community to recruit participants and to collect the completed questionnaires.

The following issues were experienced during the conduct of this survey and are reported here because although they are not part of the reporting of the results, they had a significant

impact on the conduct of the study as a whole and will be reflected in the results:

- When Internet access was sought in the surveyed rural island, it was found that there was no community facility like a Cyber Café. The Island Office has a dial-up connection that utilises the one phone line in the office and is accessible only by the senior staff. After some enquiry regarding access to the Internet by the general public, the researcher was informed that some spots on the outer parts of the island have wireless Internet connectivity and this can be utilised with pre-paid vouchers.
- The surveyed rural island community has a "bookshop" but a visit to this shop revealed that it only contains stationery, gift items and other odd goods.
- The ten page questionnaire had a two page introductory letter. However, it was noticed with the interview-style surveys from both communities, that few were interested in reading what was in it; they were more interested in hearing about it.

5.2 Participant recruitment

The researcher went door-to-door in both locations to recruit participants and to collect the questionnaires when they were completed. The people in both locations were, for the most part, supportive of the research. However, the timing of the survey coincided with the school holidays and many locals in the rural community were off the island. They use this time to visit the urban capital Malé, for medical treatment, holidaying, shopping for material and clothes for the new school term or on other general business. The researcher was aware that the timing did clash with school holidays but did not at the time believe that the island would be as deserted as it was.

As detailed in the methodology chapter, the initial plan was to survey every-fifth house from random streets, selecting from each house one male and one female above 18 years of age who consented to participate.

5.2.1 The rural community

In the rural community, the every-fifth house selection was found to be impractical in some situations as many houses were deserted, with the occupants having migrated to the capital island, Malé, or temporarily relocated for medical, educational or other reasons, being the year-end school holidays. If this was found to be the case, the immediate house next door was approached.

The assistance of a 13 year-old local girl who showed the way on the rural island was particularly useful as the island was not that familiar to the researcher. It was difficult to find the way in the narrow lanes which blend together at some points into actual house plots. The

Maldives does not have a house numbering system. Instead, houses are named and even so some houses do not have their required name plates. As well, there are no street maps for the rural islands, at least none that were accessible.

To start the survey, a house was randomly selected on the main street of the island. At this house, a woman was approached and she consented to participate. When asked, she said she was the only person above 18 years of age in the household and that her husband was off the island and might not be back soon. The next fifth house, the researcher was informed, was deserted; hence in this case the very next house was selected. After the next fifth house, the following fifth house was also not occupied and it was the end of the road. Therefore, the fourth house was selected where 3 people were approached with only one person consenting to participate. From the 2 men who were approached one said he was not a local. However, it was later revealed that the man was a local but was not honest because he had not wanted to participate. This was found odd since they were informed that they could choose not to participate if that was what they wanted.

This pattern of selecting every fourth, fifth or sixth, depending on the surrounding houses, was followed throughout the first four days of the rural community survey. On the first day of the rural survey, 6 houses were approached and there was an inequality of 3 male recruitments versus 6 female recruitments. In 2 of the houses the women who were initially approached called someone else, a younger member, saying that they were too old to participate. On the first day only 2 respondents self-administered the questionnaires and the remainder were carried out as survey interviews at their request.

On the second day of the survey, 6 houses were approached recruiting 10 participants. There was one instance where an elderly woman was home and said she was too old and asked the researcher to come back in a few days by which time her daughter and son-in-law would be back. As it happened they were not back by the time the rural community survey was completed. Both a male and a female participant were recruited from the other 5 households bringing the total participant recruitment to 8 males and 11 females. Of the 10 recruitments for that day, 3 were conducted as survey interviews and the other questionnaires were collected within the next two days as arranged.

On the third day of the rural survey, 8 houses were approached with no recruits from one house where a woman was approached who refused to participate. Both males and females agreed to participate from two of these eight houses, while either a male or female were recruited from the others. A total of 9 participants were recruited with 5 male and 4 female participants. From these 9 questionnaires, 2 were completed as a survey interview. Self-administration was encouraged where possible as it was found that undertaking the

interviews was time consuming and frustrating. In order to maintain the validity and comparability of data across both self-administered and researcher completed questionnaires, the researcher could not further explain the questions even when carrying out as interviews.

On the fourth day, 13 households were approached recruiting 19 participants: 6 males and 13 females. Of these 13 houses both a male and a female could be recruited from five houses. In the remaining households, the men were away working on a resort island and, the researcher was told, would not be back for days or even months. In two of the houses men were around but they refused to participate. In one of the houses 2 questionnaires were accepted for a male and female, but when the researcher went back to collect the questionnaires, both were being completed by women. Of the 19 questionnaires for the day, 6 were completed as survey interviews and the remainder were self-administered and these were collected as arranged at the given times within the next two days. In some cases the researcher had to visit the houses two to three times and, in one instance, four times before the questionnaire was ready for collection.

At the completion of the house visits to this stage, a total of 47 completed questionnaires had been collected with 19 male and 28 female respondents. Hence, to make the gender balance more representative, men were targeted for the remaining questionnaires. For this, on the fifth day of the rural survey, the researcher approached the island office which has predominately male employees. Two questionnaires were completed by employees from the island office and 2 other male participants were recruited from the *holhuashi*[19] area. These 4 questionnaires were self-administered and two were returned by the participants to the researcher's address. The other two were collected as arranged. This brought the number of participants to 23 male and 28 female participants from the rural community.

5.2.2 The urban community - Malé

Recruiting participants from every-fifth house was also a little difficult in the urban community setting. The difficulty was in differentiating between one house and the other. Malé is quite congested and a single house, most of the time, has several floors with a different household living on each floor or even a few families on each floor, while sometimes a house contains only one household. Some houses, even single storied ones, have several doors and this sometimes indicates that they are different households. Hence, there were irregularities and confusions in identifying every-fifth house, notwithstanding that the researcher is from Malé.

[19] *Holhuashi* is a seating area on the beach-front in rural islands where people get together for a chat. These are usually occupied by elderly people and most predominately by men at certain times and women at others, depending on their work routine.

It can be said that the majority of the people, both male and female, in Malé work outside their homes for a living. Hence, there were instances where the doors were locked or where there was only a house-maid who could not tell when their employer(s) would be back or if a questionnaire could be left for them or not. This was more likely in those instances when the researcher carried participant recruitment during weekdays. The participant recruitment rate was higher on Saturdays[20] and after-work[21] hours.

The urban community survey did not cover the whole geographic area of the island as Malé is considerably larger with a population of over 70,000 people compared to some 1,750 people on the surveyed rural island. Hence, the every-fifth house rule was applied for three separate clusters.

The first cluster of the urban community survey was selected from the *Henveiru*[22] ward. In the first house that was approached, there was a man and a woman and both of them consented to participate in the survey. The next fifth house (or more appropriately door) was an entrance way to a set of stairs and the researcher felt it was imposing to go up the stairs as it might be leading to a bedroom which is very common given the housing situation in Malé. Therefore, the next adjacent house was selected and a man accepted 2 questionnaires. He said he might be able to get the woman in the house to complete it too. It was agreed that the questionnaires be collected in the afternoon. As it happened, the questionnaires were not ready and had to be picked up the following evening. Here again, because of the absence of house numbers, it was difficult to keep track of the houses which the researcher needed to return to for the questionnaire collection. Some houses had a name plate while others did not. Some houses had one name plate for several doorways with no clear boundary to differentiate one house from the other.

On the first day of the survey, a total of 13 households agreed to participate with one household accepting a questionnaire only for a female. Two questionnaires, one for male and one for female were accepted from 12 of these households. Both of the questionnaires were completed and returned only by six households, while one household returned 2 blank questionnaires the following day saying that they were not interested. After several follow-up attempts, one household returned 2 questionnaires each completed by females who stated that the men in the house did not have the time to participate. Two of the households, even after several promised follow-up pick up times, failed to return the questionnaires at all.

[20] The Maldives observes Friday and Saturday as the weekend, Saturday being an 'unofficial' working day for many of the private and government organisations.
[21] In the Maldives, the official work hours are from 7:30 to 14:30 in the government sector, and 8:30 to 16:00 in most of the private sector organisations.
[22] Malé (the traditional physical boundary) island is divided into 4 wards, *Henveiru, Galolhu, Maafannu, & Machangolhi*, for administrative purposes. In recent years, two separate islands close to Malé have been declared as wards of the capital island, Malé, naming them *Hulhumalé* and *Villimalé* respectively.

After four days of follow-up with the questionnaires, 6 male and 11 female participants were recruited for the first day.

Based on this first batch of participant recruitment and questionnaire collection in the urban community, it was felt that the collection process might be made easier for the researcher and less imposing on the participants if a contact phone number was sought from the prospective participants so that a courtesy phone call could be made prior to visiting them for questionnaire collection as it had been found that in many instances the respondents were not at home at the promised time. It was also found awkward to go to the houses to realise they were either not home or that the questionnaire was not ready. A contact phone number was requested and recorded only if they agreed to give it.

On the second day of the urban community survey, a cluster of houses was approached in the *Machangolhi* ward. Seven households accepted questionnaires, 6 of them taking 2 questionnaires, one for a male and one for a female. After two days of follow-up, 4 male and 7 female participants were recruited. Three questionnaires intended for male participants, were returned blank. One of these men said he was not interested and the other two said they did not have the time.

This cluster was continued again on the third day of the survey which happened to be a weekday when it was found that many households were locked up or that there was no one who could be recruited. The only people around were expatriate workers or elderly people who thought they were too old to participate in the survey, or children under 18 years of age who could not be recruited. Hence questionnaires were accepted by only one household and 2 shopkeepers were recruited from 2 different corner shops in the area, bringing the total to 13 male and 19 female respondents.

The fourth day of participant recruitment was conducted on a weekday, but this time after official working hours, and another cluster of households was chosen from a different location in the *Henveiru* ward. Ten households accepted the questionnaire with 8 of them accepting 2 each. Five of the households returned 2 completed questionnaires, with 3 households returning blank questionnaires which had been accepted for men, two in their absence. In one household a woman refused to participate citing that she was not competent. The man in the house accepted a questionnaire which was returned blank the next day stating that he did not have time to go through it. The questionnaires from this cluster were collected within three days. This brought the total to 18 male and 27 female participants.

To balance this unequal representation in gender, the next few days were allotted to recruiting mainly male participants. Hence a deliberate attempt was made by approaching

male groups in the park area at the eastern end[23] of Malé in the two following days. Three males agreed to participate, but one returned the blank questionnaire stating that it was too long. An additional questionnaire was given to a person working at a government organisation who agreed to participate. This brought the total to 21 male and 27 female participants from the urban community. Given the difficulty in recruiting male participants, and the limitation on the time frame to follow-up on more survey recruitments, it was decided to close the survey at 48 participants.

The final participant recruitment figures by gender for both survey communities are shown in Table 5.1.

	# of male respondents	# of female respondents	Total
Rural Community	22	29	**51**
Urban community	21	27	**48**
Total	**43**	**56**	**99**

Table 5.1: Gender representation from both survey communities

It was difficult to recruit male participants in both survey localities. In the rural community the difficulty was because many of them were not residing on the island as they were out working on other resort islands. In Malé it would seem that the difficulty in recruiting male participants was mainly due to their time constraints, or disinterest.

5.2.3 Response rate

The data in Table 5.2 below shows a breakdown of the response rate figures including questionnaire completion rates.

	Rural		Urban	
Approached	61		72	
Accepted to participate / questionnaires distributed	51		64	
Participated	51		48	
Blank questionnaires returned after accepting	0		10	
Not returned at all	0		6	
All applicable questions answered	19	37.3%	22	45.8%
At least 5 applicable questions not answered	25	49.0%	21	43.8%
6-10 applicable questions not answered	7	13.7%	3	6.3%
More than 10 applicable questions not answered	0	0.0%	2	4.2%

Table 5.2: Statistics on response rates and questionnaire completion rates

In the rural community 61 people were approached in 34 households, and 51 people accepted to participate. Of the 10 who refused to participate, 2 people said no good will come of the work and remarked about the political situation and voiced their distrust of the government and the researcher not being independent of the government. Of the remaining 7 refusals, 3 middle aged women thought they were too old or not educated enough to participate. Three other women and 2 men rejected participation with no stated reasons. The 51 questionnaires that were distributed in the rural community were returned completed.

[23] The park area with the artificial beach at the eastern end of Malé is a social space where people of all ages and both genders come together for either a leisurely break or a game of football, basketball or a swim.

In the urban community 72 people were approached in 44 households and people from 34 of these households agreed to participate. Questionnaires were given out to 34 male and 30 female prospective participants. Ten of these questionnaires (one accepted for female and 9 for male) were returned blank with the majority of these participants citing "no time" as their reason. The one household that returned both questionnaires blank said that they could not see any benefit in the survey. Two of the households which accepted 2 questionnaires each, one for a male and one for a female, and 2 other households that accepted questionnaires for men did not return these questionnaires even after two or three follow-up visits, citing time constraints as their reason.

As seen in Table 5.2, only 19 (37.3%) participants from the rural community and 22 (45.8%) from the urban community answered all the applicable questions. Another 25 (49.0%) of the rural and 21 (43.8%) of the urban respondents left at least 5 applicable questions unanswered. The returned questionnaires, whether complete or not, were taken into consideration in the analysis of the results as there might very well have been questions not applicable to the respondents from their viewpoint. Detailed figures of the questionnaire completion rate are presented as Appendix 11.

5.2.4 Questionnaire administration method

At the design stage of the survey questionnaire, it was anticipated that some people would prefer the questionnaires to be administered as survey interviews rather than self-administering it on their own time. This was found more prevalent in the rural community as shown by the data in Table 5.3 below.

	Rural community		Urban community	
Self-administered	33	64.7%	42	87.5%
Survey Interview style	17	33.3%	6	12.5%
Mixed	1	2.0%	0	0.0%
Total	**51**	**100.0%**	**48**	**100.0%**

Table 5.3: The method of questionnaire completion

The interview style involved the researcher reading out the questions with the proposed optional answers in the categorical questions and ticking the appropriate boxes based on the response from the participant. In the case of open-ended questions, this involved the researcher writing the responses. Otherwise, the questionnaire was given to the participant who was requested to have it completed and ready for collection at a mutually agreed date and time.

The data in Table 5.3 reveal that in the rural community 17 (33.3%) participants opted for the interview style while only 6 (12.5%) from the urban community chose this method. The majority of the respondents from both communities self-administered the questionnaire with

33 (64.7%) rural respondents and 42 (87.5%) urban respondents doing so. One rural participant began to self-administer, but when the researcher returned for the questionnaire it was found that the respondent was having difficulty, and at her request, starting from Q28, the questionnaire was completed as an interview.

This preference to self-administer, or preferring an interview, may have some relationship with the confidence level of the participants in completing a written document. Based on a multi-variable comparison, a correlation was found between the educational level of the people (Q3) and their choice of questionnaire administration method. This is shown in Table 5.4 below.

Education level	Basic literacy	Primary	Secondary	Higher secondary	Diploma / Advanced Diploma	University degree	Total
Self-administered[24]	4	15	30	15	5	5	**74**
Survey Interview style	3	15	4	0	1	0	**23**
Mixed	0	1	0	0	0	0	**1**
Total	**7**	**31**	**34**	**15**	**6**	**5**	**98**

Table 5.4: Correlation between the questionnaire completion method and education level of participants

Three of the 7 respondents who identified themselves as having only basic literacy skills, preferred to complete the survey as an interview; half of the respondents from primary education background, and 4 of the 34 respondents with secondary education level opted for the interview style.

All of the 15 respondents with higher secondary education, and all of the five respondents with a university degree opted to self-administer the questionnaire. One person in the rural setting with a diploma qualification chose the interview method while the other five respondents with a diploma qualification self-administered.

An analysis of self-administration vs. interview was undertaken based on the spread of the age categories as sought from the demographic data from Q2 and is shown in Table 5.5 below.

	Age group	18-20	21-25	26-30	31-35	36-45	46-55	56+	Total
Type of data collection	Self administered	8	15	12	13	19	5	4	**76**
	Interview	0	3	1	2	6	4	6	**22**
	Mixed	0	0	0	1	0	0	0	**1**
	Total	**8**	**18**	**13**	**16**	**25**	**9**	**10**	**99**

Table 5.5: Correlation between the questionnaire administration method and age

It can be argued that there is a correlation with age and the survey administration method since the proportion of respondents who preferred the interview style increases with the age. While all 8 respondents from the 18-20 age groups self-administered the questionnaire, 4 of 9 and 6 of 10 respondents from 56-55 and 56+ age groups respectively chose the interview style.

[24] One respondent, who self-administered, did not specify his/her educational level.

The choice of questionnaire administration method might also have some relevance in the time factor. In the rural community, people seemed very relaxed in their approach to life while in the urban community people appeared to be much more pre-occupied; the respondents in the rural community were very obliging and most of the respondents seemed to have the time to sit and answer the questions there and then.

5.3 Part I: Demographic data

The first part of the questionnaire consisted of demographic questions (Q1 to Q8) dealing with gender, age, educational level, occupational status and information on the sector of employment for those who worked.

5.3.1 Gender

The gender distribution of the survey respondents, sought in Q1, has already been discussed under participant recruitment and the data is tabulated in Table 5.1 above.

5.3.2 Age distribution

Participants were only recruited above 18 years of age. They were not asked for their specific age, instead they were provided with age categories to select. The age distribution of the survey participants is shown in Table 5.6 and graphically represented in Figure 5.1 below.

	Rural		Urban		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
18-20	4	7.8	4	8.3	8	8.1
21-25	12	23.5	6	12.5	18	18.2
26-30	6	11.8	7	14.6	13	13.1
31-35	8	15.7	8	16.7	16	16.2
36-45	15	29.4	10	20.8	25	25.3
46-55	2	3.9	7	14.6	9	9.1
56+	4	7.8	6	12.5	10	10.1
Total	**51**	**100.0**	**48**	**100.0**	**99**	**100.0**

Table 5.6: Age distribution of the survey respondents

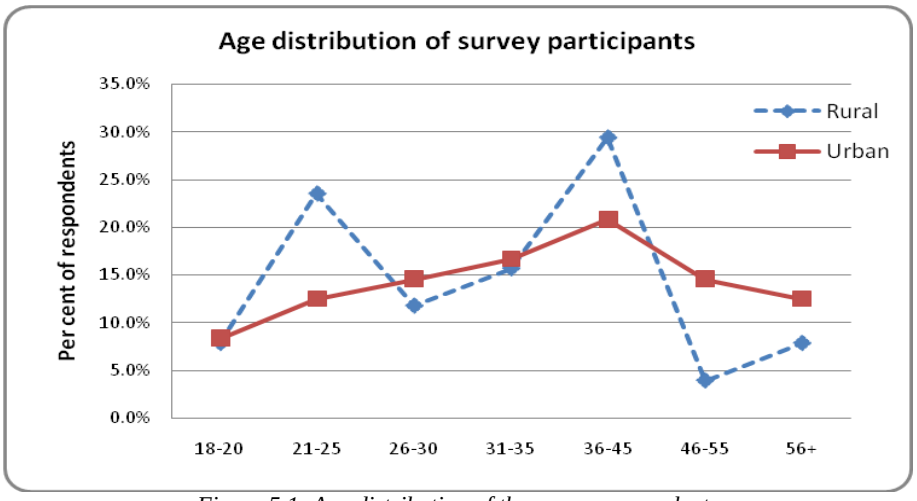


Figure 5.1: Age distribution of the survey respondents

In both rural and urban community surveys the majority of participants were between 36 to 45 years with 15 (29.4%) rural participants and 10 (20.8%) urban participants in this age category.

5.3.3 Educational level

Questions 3-6 sought information on the level of education the participants had achieved. Of the 99 participants, 98 responded to the question on level of education in Q3. Some respondents identified more than one qualification, in which case the highest qualification was considered for the purposes of this analysis. This data is shown in Table 5.7 and graphically represented in Figure 5.2 below.

	Rural		Urban		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Basic literacy	4	7.8%	3	6.3%	7	7.1%
Primary	24	47.1%	7	14.6%	31	31.3%
Secondary	13	25.5%	21	43.8%	34	34.3%
Higher secondary	7	13.7%	8	16.7%	15	15.2%
Diploma / Advanced Diploma	1	2.0%	5	10.4%	6	6.1%
University (undergraduate)	1	2.0%	2	4.2%	3	3.0%
University (Postgraduate)			2	4.2%	2	2.0%
Missing	1	2.0%			1	1.0%
Total	**51**	**100.0%**	**48**	**100.0%**	**99**	**100**

Table 5.7: Education level of the survey respondents

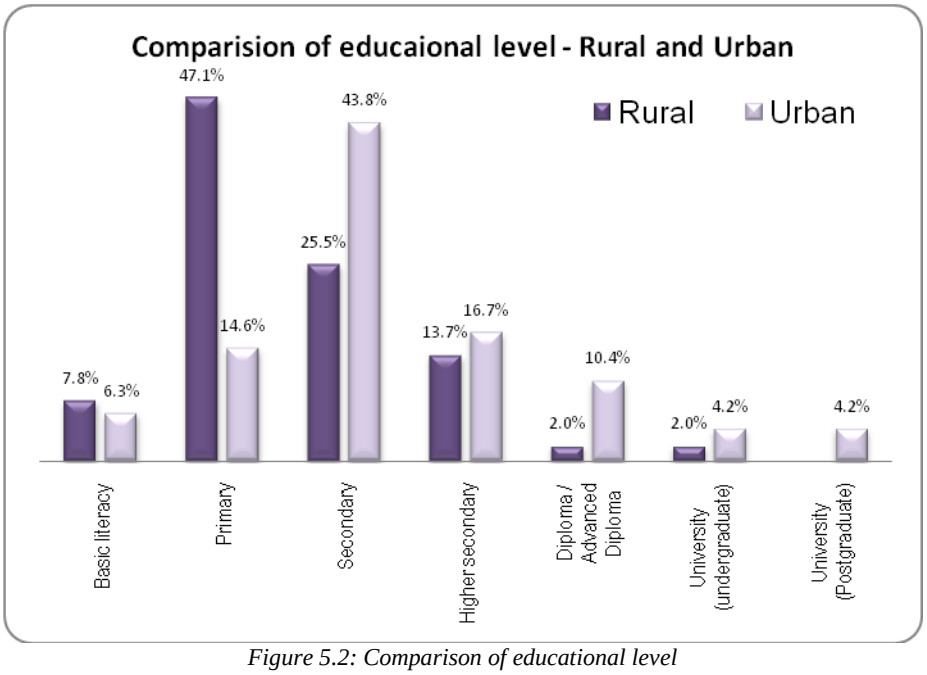


Figure 5.2: Comparison of educational level

The data in Table 5.7 reveal that the majority of the participants in the rural community were educated at primary level, with 24 (47.1%) participants. The majority of the respondents in the urban community were educated up to secondary level, with 21 (43.8%) participants. The other educational levels are distributed among the remaining respondents without much of a difference between rural and urban communities other than those who had gained diploma

level or university qualifications. Among the rural community participants only one had gained a diploma qualification, one had an undergraduate degree and none have a post graduate degree.

In addition to the distinction between educational levels in each community, there also was a distinction in educational level with the age of the respondents. This is shown in Figure 5.3 below.

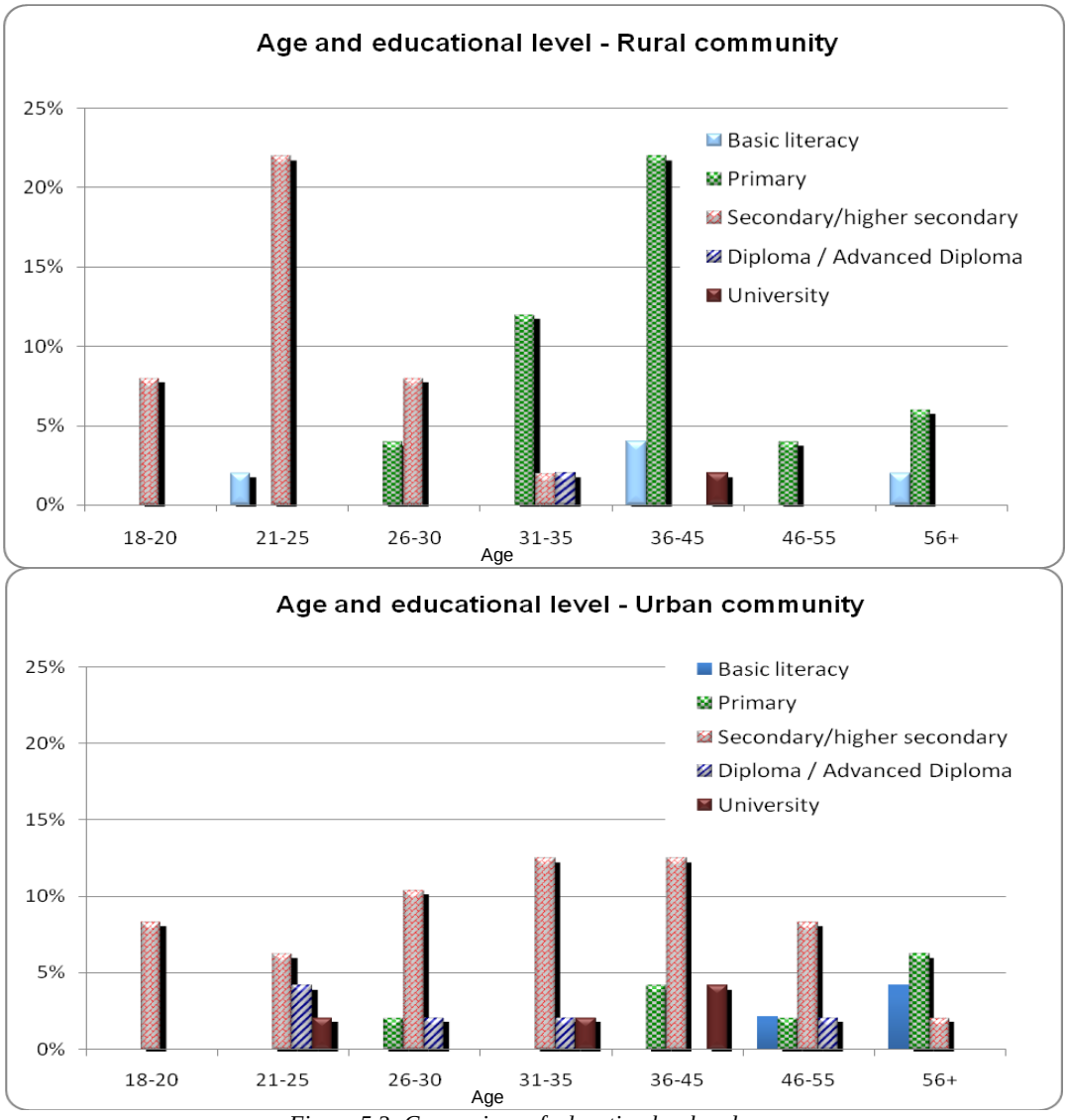


Figure 5.3: Comparison of education level and age

The changing trend in educational level is quite evident in the above figure with more people from the younger age groups having completed higher levels of education in both communities.

Questions 5 to 6 sought information on whether the participants had studied abroad for over 3 months, and asked in which countries they had studied in and what qualification was obtained. The results are show in Table 5.8 below.

Studied abroad?	Rural	Urban	Total
Yes	2	10	**12**
No	48	34	**82**
Missing	1	4	**5**
Total	**51**	**48**	***99***
Qualifications overseas	**Rural**	**Urban**	**Total**
Short-term training	1	5	**6**
Diploma / Advanced Diploma		2	**2**
University degree	1	3	**4**
Total	**2**	**10**	***12***

Table 5.8: Educational qualifications gained abroad

Two rural respondents and 10 urban respondents stated they had studied abroad. Of the 2 rural respondents, one had studied in Sri Lanka for a short-term and the other respondent had studied for an undergraduate degree in Saudi Arabia. Of the 10 urban respondents, 5 undertook short-term training with 2 having studied in Sri Lanka, one in Australia and the other 2 respondents did not specify a country. Of the 5 remaining respondents, 2 studied for a diploma/advanced diploma – one in Malaysia and the other in India and also Sri Lanka; one respondent studied an undergraduate degree in Australia. Of the 2 respondents with a postgraduate degree, one studied in Malaysia and the second in both Australia and Malaysia.

5.3.4 Occupation

Question 7 sought information on the participants' occupational status and Q8 sought information on the sector in which those who were employed, worked. Questions 7 and 8 where complementary questions as far as status of employment were concerned. To cover the wide variety of occupation scenarios, Q7 presented 5 possible responses of "homemaker", "student", "employed", "retired", and "unemployed". It was anticipated that if asked "are you employed" (when asked in Dhivehi the nearest translation is "do you have a job"), the self-employed people, like fisherman, local fish processors and seamstresses would generally tend to say "no" as they are not on a formal employment contract with the government or a private organisation. Hence the next question which followed was framed: "if you work, which sector do you work in?" This ensured that even if people did not tick on the "employed" section in Q7 they still responded to Q8 on sector of employment. For example, respondent R86 replied "unemployed" in Q7, while he answered Q8 that he was working as a fisherman. In the analysis of the data for Q7, the "unemployed" was changed to "employed" if a sector has been identified in Q8. The adjusted results for Q7 on occupational status are shown in Table 5.9 below.

	Rural				Urban				Total	
	male	female	Total	Percent	male	female	Total	Percent	Frequency	Percent
Homemaker	0	20	20	39.2	0	12	12	25	32	32.3
Student	1	1	2	3.9	0	2	2	4.2	4	4
Employed	17	5	22	43.1	21	9	30	62.5	52	52.5
Retired	0	0	-	-	0	2	2	4.2	2	2
Unemployed	4	3	7	13.7	0	2	2	4.2	9	9.1
Total	**22**	**29**	**51**	**100**	**21**	**27**	**48**	**100**	**99**	**100**

Table 5.9: Occupational status of the participants

In both communities, a large proportion of the respondents replied that they were "employed" with 21 (43.1%) respondents from the rural community and 30 (62.5%) from the urban community being in this category. In the rural survey, 20 (39.2%) respondents identified themselves as "homemakers" while 12 (25%) urban respondents stated so. The "homemaker" category of respondents was made up of only females in both communities. Twenty of the 29 rural female respondents and 12 of the 27 urban female respondents stated they were "homemakers". None of the rural respondents identified themselves as "retired" while 2 urban female respondents stated they were. Four male and 3 female respondents from the rural community indicated they were "unemployed" (seeking employment) while only 2 urban respondents stated the same. The sector of employment for those who were employed, as sought from a combination of answers from Q7 and Q8, is shown in Table 5.10 below.

	Rural		Urban		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Agriculture	-	-	1	2.1	1	1.0
Commerce	1	2	7	14.6	8	8.2
Construction	-	-	2	4.2	2	2.0
Education /Academic	5	10	3	6.3	8	8.2
Electricity and Water	-	-	1	2.1	1	1.0
Fishing	7	14	-	-	7	7.1
Health and Welfare	2	4	1	2.1	3	3.1
Services	3	6	14	29.2	17	17.3
Tourism	6	12	2	4.2	8	8.2
Transport & Communications	-	-	2	4.2	2	2.0
Dress making	2	4	2	4.2	4	4.1
Carpentry	1	2	-	-	1	1.0
Not applicable	23	46	13	24.1	36	36.7
Total	50	-	-	-	98	
Missing	1	-	-	-	1	
	51	**100**	**48**	**100**	**99**	**100.0**

Table 5.10: Employment sector for those respondents who are employed

Among those respondents who identified themselves as working, 7 (14%) rural respondents indicated they were in the "fishing" sector, with 6 (12%) in "tourism", and 5 (10%) in the "education/academic" sector. In the urban community, the most common employment sector was "services" with 14 (29.2%) respondents, followed by "commerce" with 7 (14.6%) and "education/academic" with 3 (6.3%) respondents.

Ten respondents identified their employment sector as "other", stating sewing, carpentry, communication, government employee, guard, Maldives Defence Force, and lacquer work. Optional categories for "dress making" and "carpentry" were added to the existing sector listing to reflect these choices. The other answers have been amalgamated to the relevant categories. One respondent from the rural community who answered as "employed" did not specify any employment sector.

This analysis completes the demographic data requested from the participants for this survey. The second part of the questionnaire covered access to information.

5.4 Part II: Access to information

This section (Q9 to Q22) was included to ascertain the level of access to information and information sources by both communities and was divided into five sub-sections: communication, TV/radio, computer ownership and use, reading, and library. In addition to identifying the level of access, it was also hoped to study the level of awareness of the information sources at the disposal of the respondents.

5.4.1 Communication

A number of questions were asked to ascertain the methods of verbal and written communication used by the communities in their day-to-day living as well as in their official dealings. Questions 9 to 13 dealt with the telephone (including land line and mobile), the Internet, and the use of e-mail as a communication tool for personal and official purposes. These results are presented in Table 5.11 below.

		Rural		Urban	
Q9. Do you have a telephone in your household (for common use)?	Yes	34	66.7%	34	70.8%
	No	16	31.4%	13	27.1%
	Missing	1	2.0%	1	2.1%
	Total	**51**	**100.0%**	**48**	**100.0%**
Q10. Do you have mobile phone for personal use?	Yes	40	78.4%	41	85.4%
	No	11	21.6%	7	14.6%
	Total	**51**	**100.0%**	**48**	**100.0%**
Q11. Do you use mobile phone to access the Internet?	Yes	10	19.6%	22	45.8%
	No	39	76.5%	25	52.1%
	Missing	2	3.9%	1	2.1%
	Total	**51**	**100.0%**	**48**	**100.0%**
Q12. Do you use email to communicate with family & friends?	Yes	9	17.6%	31	64.6%
	No	40	78.4%	16	33.3%
	Missing	2	3.9%	1	2.1%
	Total	**51**	**100.0%**	**48**	**100.0%**
Q13. Do you use email for official purposes?	Yes	5	9.8%	25	52.1%
	No	43	84.3%	22	45.8%
	Missing	3	5.9%	1	2.1%
	Total	**51**	**100.0%**	**48**	**100.0%**

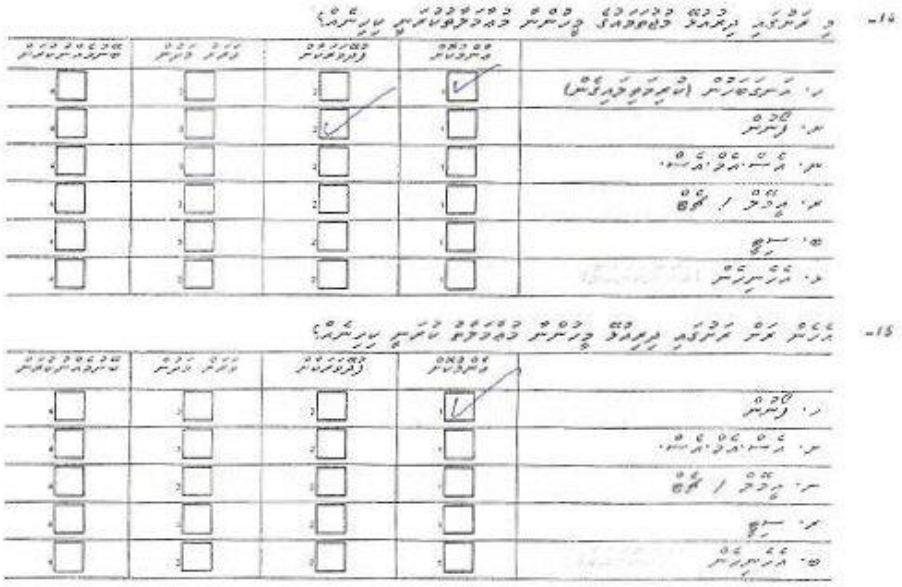
Table 5.11: Communication facilities used

There appears to be little difference between the rural and urban communities in terms of the access to and use of the telephone. The usage is slightly lower in the rural community with 34 (66.7%) rural respondents and 34 (70.8%) urban respondents stating they have a telephone in their household for common use (either a landline or mobile). Forty (78.4%) rural respondents and 41 (85.4%) urban respondents indicated they had a mobile phone for personal use. It is also interesting to note that only one rural respondent did not have access to a phone, either in their home or to a personal mobile phone. This figure is slightly higher in the urban community with 3 urban respondents not having access to either a telephone in the home or a mobile phone.

The use of mobile phones to access the Internet is higher in the urban community with 22 (45.8%) urban respondents compared to 10 (19.6%) rural respondents using this facility. A

similar trend emerges in the use of e-mail as a communication tool with 9 (17.6%) and 5 (9.8%) rural respondents stating that they used email to communicate with friends and family, and for official purposes, respectively. In the urban community this figure is made up of 31 (64.6%) and 25 (52.1%) of the respondents respectively.

Questions 14 to 15 attempted to identify general methods of communication with people in the same island community and with those outside the physical boundary of their own island. These were presented as categorical questions asking the respondents to identify their answers as "most often", "often", "rarely", or "never". The responses show that, in many instances, respondents only marked "most often", "often", and "rarely", leaving the "never" field blank. For example, Figure 5.4 below contains a scanned section from M39's questionnaire in its original form in the local language. An English translation is at the lower section of the same figure.



14. How do you communicate with others **within your resident island community**?

	Most often	Often	Rarely	Never
a. Face-to-face	☑ 1	☐ 2	☐ 3	☐ 4
b. Phone	☐ 1	☑ 2	☐ 3	☐ 4
c. SMS	☐ 1	☐ 2	☐ 3	☐ 4
d. e-mail / chat	☐ 1	☐ 2	☐ 3	☐ 4
e. Letters	☐ 1	☐ 2	☐ 3	☐ 4
f. Other (please specify)	☐ 1	☐ 2	☐ 3	☐ 4

15. How do you communicate with people in other islands?

	Most often	Often	Rarely	Never
a. Phone	☑ 1	☐ 2	☐ 3	☐ 4
b. SMS	☐ 1	☐ 2	☐ 3	☐ 4
c. e-mail / chat	☐ 1	☐ 2	☐ 3	☐ 4
d. Letters	☐ 1	☐ 2	☐ 3	☐ 4
e. Other (please specify)	☐ 1	☐ 2	☐ 3	☐ 4

Figure 5.4: An example of how the categorical questions have been answered by the respondents (translated English version)

In this example, the answer for category (a) in Q14 is ticked as "most often" and category (b) is ticked as "often" indicating that face-to-face communication was the "most often" used method to interact with people from the same island community while the telephone was used "often". All other categories in Q14 and Q15 have not been answered, which could be interpreted to read that no other method of communication was used in this situation. With this logic, similar questions can be considered "not answered" if not even a single tick appears in any of the categories. Based on this interpretation, one participant from the urban community did not respond to Question 14 and 15 (the same participant), while all other participants ticked at least one box for both questions. The results for Q14 and Q15 are taken as is, without interpreting the "not answered" questions whatsoever, and are shown in Table 5.12 below.

Q14. How do you communicate with others **within your resident island community?**

Rural	**Most often**		**Often**		**Rarely**		**Never**		**Missing**		**Total**
face-to-face	46	90.2%	4	7.8%		0.0%		0.0%	1	2.0%	51
telephone	6	11.8%	27	52.9%	13	25.5%	2	3.9%	3	5.9%	51
SMS	3	5.9%	9	17.6%	12	23.5%	20	39.2%	7	13.7%	51
email/chat	2	3.9%	1	2.0%	7	13.7%	30	58.8%	11	21.6%	51
letters		0.0%		0.0%	3	5.9%	39	76.5%	9	17.6%	51
other		0.0%		0.0%	3	5.9%	13	25.5%	35	68.6%	51
Urban	**Most often**		**Often**		**Rarely**		**Never**		**Missing**		**Total**
face-to-face	38	79.2%	4	8.3%	3	6.3%	1	2.1%	2	4.2%	48
telephone	28	58.3%	15	31.3%	1	2.1%	2	4.2%	2	4.2%	48
SMS	12	25.0%	16	33.3%	5	10.4%	7	14.6%	8	16.7%	48
email/chat	11	22.9%	8	16.7%	8	16.7%	10	20.8%	11	22.9%	48
letters	1	2.1%	1	2.1%	4	8.3%	27	56.3%	15	31.3%	48
other	1	2.1%		0.0%	1	2.1%	9	18.8%	37	77.1%	48

Q15. How do you communicate with people on other islands?

Rural	**Most often**		**Often**		**Rarely**		**Never**		**Missing**		**Total**
telephone	42	82.4%	6	11.8%	3	5.9%		0.0%		0.0%	51
SMS	8	15.7%	7	13.7%	9	17.6%	19	37.3%	8	15.7%	51
email/chat	5	9.8%	2	3.9%	4	7.8%	29	56.9%	11	21.6%	51
letters		0.0%		0.0%	1	2.0%	38	74.5%	12	23.5%	51
other		0.0%		0.0%	1	2.0%	15	29.4%	35	68.6%	51
Urban	**Most often**		**Often**		**Rarely**		**Never**		**Missing**		**Total**
telephone	38	74.5%	4	7.8%	4	7.8%	1	2.0%	1	2.0%	48
SMS	13	25.5%	14	27.5%	4	7.8%	9	17.6%	8	15.7%	48
email/chat	12	23.5%	7	13.7%	6	11.8%	14	27.5%	9	17.6%	48
letters	2	3.9%	1	2.0%	7	13.7%	22	43.1%	16	31.4%	48
other	1	2.0%		0.0%	2	3.9%	11	21.6%	34	66.7%	48

Table 5.12: Communication methods used within and between communities

Face-to-face communication was the "most often" used method of interaction in both communities, with 46 (90.2%) rural respondents and 38 (79.2%) urban respondents communicating in this way. Reliance on the telephone is higher in the urban community in this regard, with 6 (11.8%) rural respondents and 28 (58.3%) urban respondents indicating "most often" for the use of phone.

While 25.5% of the rural respondents "rarely" used the telephone as a communication tool within the island; it was commonly used (82.4% as "most often" and 11.8% as "often") to communicate with people outside their island community. Contrarily, the urban respondents indicated that they use email/chat (25% "most often", 14.6% "often", 12.5% "rarely") to

communicate with people outside their community. Additionally, use of e-mail/chat to communicate with people in the same community was higher with urban respondents. Fifty six percent (22.9% "most often", 16.7% "often", and 16.7% "rarely") of the urban community participants indicated they used e-mail/chat while only 19.6% (3.9% "most often", 2% "often", 13.7% "rarely") of the rural community participants used these communication channels.

Very few of the respondents, in either community, indicated that they communicated with other people through letters, either in the same community or with people outside the physical boundary of their islands. Where the researcher conducted the surveys as interviews, it was observed that participants were surprised that the question was even posed.

5.4.2 TV/radio

The section on TV/radio comprised 7 questions. Questions 16 to 20 were presented as categorical questions with Q20 accepting multiple responses. These questions sought information on whether the respondents had access to TV/radio and other associated media like cable TV and CD/DVD players. Questions 21 and 22 were open-ended, seeking information on the types of programs the participants watched on television and listened to on the radio.

The results for the five categorical questions are presented in Table 5.13 below.

		Rural		*Urban*	
Q16. Do you have a radio in your household?	Yes	40	78.4%	43	89.6%
	No	11	21.6%	4	8.3%
	Missing	-	-	1	2.1%
	Total	51	100%	48	100%
Q17. If you do not have radio at home, where do you listen to radio?	Friends / neighbours	3	5.9%	-	-
	Community facility	1	2.0%	1	2.1%
	Other	1	2.0%	1	2.1%
	Do not listen to radio	16	31.4%	7	14.6%
	Not applicable	30	58.8%	38	79.2%
	Missing	-	-	1	2.1%
	Total	51	100%	48	100%
Q18. Do you have a TV in your household?	Yes	50	98.0%	47	97.9%
	No	1	2.0%	1	2.1%
	Total	51	100%	48	100%
Q19. If you do not have TV at home, where do you watch TV?	Friends / neighbours	3	5.9%	2	4.2%
	Community facility	-	-	-	-
	Other	2	3.9%	1	2.1%
	Do not watch TV	2	3.9%	2	4.2%
	Not applicable	44	86.3%	43	89.6%
	Total	51	100%	48	100%
Q20. Do you have the following in your household? (multiple response)	Cable TV	50	98.0%	39	81.3%
	Satellite TV	3	5.9%	7	14.6%
	CD/DVD player	40	78.4%	34	70.8%
	Video player	18	35.3%	17	35.4%
	Non of the above ticked	1	2.0%	2	4.2%

Table 5.13: Access to TV/radio and related media

Of the 51 rural respondents, 40 (78.4%) had a radio and 50 (98.0%) had a TV in their household; while of the 48 urban respondents, 43 (89.6%) had a radio and 47 (97.9%) had a TV. There appears to be little difference between both communities in terms of access to radio and television and associated media. Remarkably, 50 (98%) of the rural respondents had cable TV at home while this was slightly lower for the urban community with 39 (81.3%) urban respondents stating so. In both communities, more respondents had CD/DVD players than video players; 78.4% of the rural and 70.8% of the urban respondents had CD/DVD players, and 35.3% of the rural and 35.4% of the urban respondents had video players.

While the access level was similar, there was a difference in the number of people who actually used these facilities with 16 (31.4%) rural respondents and 7 (14.6%) urban respondents stating they did not listen to the radio. From these respondents, 5 rural respondents listed what they listened to on the radio in the later question (Q22). Two respondents each from both communities stated they did not watch TV, but one of the 2 rural respondents and both the urban respondents, did answer the question on what programs they watched in answer to Q21.

Questions 21 and 22 were open-ended and a variety of responses were received on what was watched on TV and listened to on the radio. This made categorisation of the responses into meaningful data, difficult. For example, in terms of news there were responses like English news, English/Dhivehi news, and Dhivehi news; for serials there were responses like drama, Hindi drama, series, English/Hindi series, English series, Dhivehi series, and Dhivehi/Hindi series. Similar combinations of responses were provided for songs, movies, documentary, and general information programs on health, religion and finance. Some respondents provided names of specific programs while others provided specific cable channels. Hence, further analysis of these two questions has not been considered within the scope of this project. The responses in its raw data form are presented as Appendix 12.

5.4.3 Computer ownership and use

The next category of questions in the section on *access to information* was on computer ownership and use. The purpose of these questions was to gather information on the level of access to computers and the Internet and to identify the use, or lack of use, of these facilities. The data for questions 23 to 26 are shown in Table 5.14 below.

Q23. Do you have access to a computer?	Rural		Urban	
Yes	27	52.9%	40	83.3%
No	24	47.1%	8	16.7%
Total	51	100%	48	100%
Q24. If "yes" where do you have access? (multiple response)	**Rural**		**Urban**	
Home (own computer)	15	29.4%	30	62.5%
Home (belongs to another member of the household)	8	15.7%	11	22.9%
At work (one-to-one basis)	-	-	18	37.5%
At work (shared computers)	10	19.6%	8	16.7%
In a friend's/neighbour's home	-	-	5	10.4%
Community centre	-	-	-	-
Library	-	-	1	2.1%
Other - Cyber Café	1	2.0%	-	-
Q25. Have you ever used a computer?	**Rural**		**Urban**	
Yes	26	51.0%	35	72.9%
No	24	47.1%	11	22.9%
Missing	1	2.0%	2	4.2%
Total	51	100%	48	100%
Q26. If "no" please state why you have never used a computer? (open-ended)	**Rural**		**Urban**	
I do not have (at home / my own)	7	29.2%	3	23.1%
Do not have access	7	29.2%	-	-
Do not have the know-how	6	25.0%	2	15.4%
No space at home - can afford	1	4.2%	-	-
Have no need for it	1	4.2%	3	23.1%
Do not have time	-	-	2	15.4%
Cannot afford to buy	-	-	1	7.7%
missing	2	8.3%	2	15.4%
Total	24	100%	13	100%

Table 5.14: Access to computers and the Internet

Twenty four (47.1%) of the rural respondents stated that they did not have *access to a computer* while this was considerably lower for the urban community with only 8 (16.7%) respondents stating the same.

While 23 rural respondents had computers at home, 15 (29.4%) stated it was their personal computer and the remaining 8 (15.7%) respondents stated that the computer belonged to someone else in the household. In the urban community, 30 (62.5%) respondents owned their computers while another 11 (22.9%) respondents had access to a computer at home. Ten (19.6%) rural respondents and 26 (54.2%) urban respondents stated that they had access to a computer at their workplace; the rural respondents had shared access to computers at work and 18 of the 26 urban respondents had access to individual computer terminals at work.

Five urban respondents stated they had access to computers at their friend's/neighbour's house. However, these 5 respondents also had access to a computer at their own home. Interestingly, only one respondent from each of the communities stated they had access to a computer outside home or workplace. The respondent from the rural community stated s/he had computer access in a Cyber Café while the person from the urban community stated s/he had computer access in the library. This same respondent also had a personal computer at home.

Twenty four (47.1%) rural respondents and 11 (22.9%) urban respondents stated they had never used a computer. The reasons presented for this were quite similar for both communities. This was asked as an open-ended question (Q26) and for the purposes of analysis these answers were categorised and are presented in the last section of Table 5.14 above. Not having access (7 rural and none of the urban respondents) or not owning a computer (7 rural and 3 urban respondents) made up the bulk of the responses followed by lack of know-how (6 rural and 2 urban respondents).

It was interesting to consider if there were people who did not use a computer even if they had access to it. This cross tabulated data from Questions 23 and 25 is presented in Table 5.15 below.

Rural community		**Ever used a computer?**		**Total**
		Yes	No	
Have access to a computer?	Yes	19	7	26
	No	7	17	24
Total		26	24	50
Urban community		**Ever used a computer?**		**Total**
		Yes	No	
Have access to a computer?	Yes	33	5	38
	No	2	6	8
Total		35	11	46

Table 5.15: Cross tabulation for access versus use of computers

Of the 19 rural respondents who stated they had access to a computer, 7 stated they had never used one. Five of these respondents stated that, even if they had access, they would not have the know-how to use it. One person stated that there had never been a need to use a computer. Of the 38 respondents from the urban community who stated they had access to a computer, 5 stated they had never used it. Their reasons ranged from 2 respondents saying they did not have the know-how, while the three remaining respondents stated that either they were "too busy", "have no interest" or "it just hasn't happened", respectively.

Following on from the questions on *computer access and use*, the respondents were asked in Questions 27 to 31 about *Internet access and use*. These questions were included to ascertain the level of Internet awareness and Internet use among both survey communities. The results for this group of questions are presented in Table 5.16 below.

Q27. Do you know what the Internet is?	Rural		Urban	
Yes	28	54.9%	40	83.3%
No	22	43.1%	8	16.7%
Missing	1	2.0%	-	-
Total	51	100%	48	100%
Q28. Do you have access to the Internet?	**Rural**		**Urban**	
Yes	10	19.6%	34	70.8%
No	37	72.5%	14	29.2%
Missing	4	7.8%	-	-
Total	51	100%	48	100%
Q29. Do you use the Internet?	**Rural**		**Urban**	
Yes	9	17.6%	31	64.6%
No	21	41.2%	11	24.9%
Not applicable	17	33.3%	5	10.4%
Missing	4	7.8%	1	2.1%
Total	51	100%	48	100%
Q30. If "yes" to Q29, how often do you use the Internet?	**Rural**		**Urban**	
Daily	6	11.8%	26	54.2%
Weekly	1	2.0%	3	6.3%
Fortnightly	-	-	-	-
Monthly	-	-	-	-
Rarely	2	3.9%	2	4.2%
Q31. Where do you access the Internet? (multiple response)	**Rural**		**Urban**	
Home (own computer)	1	2.0%	19	37.3%
Home (belongs to another member of the household)	1	2.0%	4	7.8%
At work (one-to-one terminals)	2	3.9%	15	29.4%
At work (shared terminals)	4	7.8%	6	11.8%
In a friend's/neighbour's home	-	-	4	7.8%
Cyber Café	-	-	4	7.8%
Library	-	-	1	2.0%
Other (identified as mobile phone)	2	3.9%	2	3.9%
Missing	4	7.8%	1	37.3%
Not applicable	39	76.5%	16	7.8%

Table 5.16: Internet access and usage (Percentages as a percent of the total survey respondents in each community

These results show that 28 (54.8%) rural respondents and 40 (83.3%) urban respondents knew what the Internet was but only about half of them stated they had access to the Internet. Interestingly, 37 (72.5%) of the rural respondents, compared to 14 (29.2%) urban respondents, stated that they did not have access to the Internet.

Only 9 (17.6%) of the rural respondents compared with 31 (64.6%) of the urban respondents stated they had used the Internet. There does not appear to be much of a difference between those who had access and those who used the Internet. Of the 10 rural and 34 urban respondents who stated they had access, 9 rural and 31 urban respondents stated they had used the Internet. It is not clear why they did not use the Internet when they had access to it, as no question was asked in this regard.

Of the 9 rural respondents who used the Internet, 6 stated they used it “daily”, one person used it “weekly” and the remaining 2 respondents stated that they “rarely” used the Internet. Among the 31 urban respondents who used the Internet, 26 used it “daily” while 3 used it “weekly” with 2 others using it “rarely”. The result shows that 6 (11.8%) of the rural respondents and 26 (54.2%) of the urban respondents use the Internet daily.

Among the rural community participants, one person responded as having a personal Internet connection at home, while another person responded that the Internet was accessed on a connection on a family member's computer. The majority of the respondents who used the Internet in the rural community (6 people) used it at their workplace; 2 of them having individual computer terminals while the other 4 people used the Internet on a shared computer terminal. Two responded said they accessed the Internet using a mobile phone, which for one was the sole means of access, while the second person also used the Internet at work.

In the urban community, the majority of the Internet users (22 people) accessed it at home with 19 of them having a personal Internet connection and the remaining 3 respondents accessing the Internet on a family member's computer. Of the 19 urban respondents who had Internet access at their workplace 15 had access on individual computer terminals and 6 respondents had shared access, with 4 of them having both options. Four respondents stated they had Internet access at a friend's/neighbour's house with 3 of them also having Internet access both at home and at work. Another 4 people stated they accessed the Internet from a Cyber Café. Two of these respondents also had access to the Internet at home, while one person also had access at work with the fourth person using mobile phone access.

The mobile phone was not presented as an Internet access category in this section of the questionnaire. However, two people identified mobile phone access through the "other" category. Only one person identified the library as a source of Internet access. This person, from the urban community, also accessed the Internet at work on a shared basis, and is among the 4 people who used a Cyber Café for Internet access.

Those participants who answered "yes" to Q29, "do you use the Internet?" were directed to Q32 on the content matter of the Internet that they were familiar with. Here, they were asked to tick "yes" or "no" for each in a categorical list of Internet content. It was noticed that many participants only ticked the "yes" boxes and left the "no" boxes blank. For those who answered "yes" to Q29 and left any "yes" boxes blank in Q32, it was assumed this represented a "no" response. In this respect, there were 4 rural participants and one urban participant who did not answer Q32, even when it was applicable to them. The data in Table 5.17 below represent the "yes" responses to the categories, with the percentages as a percent of Internet users.

Q32. Have you used the following information sources? ("yes" responses)	Rural		Urban	
e-mail	8	80.0%	29	93.5%
Google	10	100.0%	29	93.5%
Search engines	4	40.0%	17	54.8%
Instant messaging/online chat	10	100.0%	28	90.3%
Online news	8	80.0%	23	74.2%
Online bookstore	1	10.0%	10	32.3%
e-mail information subscriptions	3	30.0%	15	48.4%
Topic specific websites	7	70.0%	24	77.4%
Library website	3	30.0%	11	35.5%
Online magazines/journals	4	40.0%	17	54.8%
Online database	3	30.0%	9	29.0%
Electronic books	4	40.0%	8	25.8%
Ask an expert	1	10.0%	4	12.9%
Online librarian question service	1	10.0%	3	9.7%
Blogs	1	10.0%	3	9.7%
RSS feeds	1	10.0%	17	54.8%
Facebook	4	40.0%	16	51.6%
YouTube	4	40.0%	17	54.8%
Other			9	29.0%

Table 5.17: Internet information sources used by the survey communities

While only 9 rural respondents identified themselves as using the Internet (Q29), 10 respondents answered the questions in Q32 that dealt with the type of resources and services accessed via the Internet.

Almost all of the rural respondents who used the Internet were also familiar with e-mail, Google™, and instant messaging. Of the 10 rural respondents who identified themselves as Internet users, 8 stated that they had used e-mail, and 10 stated they had used Google™ and instant messaging. The same pattern is repeated in the urban community survey. From the 31 urban respondents who used the Internet, 29 used e-mail as well as Google™, and 28 stated that they used instant messaging. It is also interesting to note that the responses to using Google™ and using search engines were quite different. In the rural community survey, 4 of the 10 respondents stated they used search engines while 17 of the 31 urban respondents did the same.

The other popular Internet information services used by both communities were online news (8 rural and 23 urban respondents) and topic specific websites (7 rural and 24 urban respondents). These were followed by online magazines/journals with 4 rural and 17 urban respondents using these. Respondents from the urban community appear to be more familiar with RSS feeds with 17 participants identifying them, while in the rural community only one person identified having used RSS feeds. Dedicated information sources appear to be a little less popular than the entertainment style sources. For example, familiarity with "ask an expert" (Q32-n) and "online library" (Q32-o) was very low in both communities. Nine urban respondents stated they used "other" sources of information on the Internet with only one respondent defining "other" as using Wikipedia.

The similarity between the Internet users from both communities in terms of Internet sources used is shown in Figure 5.5 below.

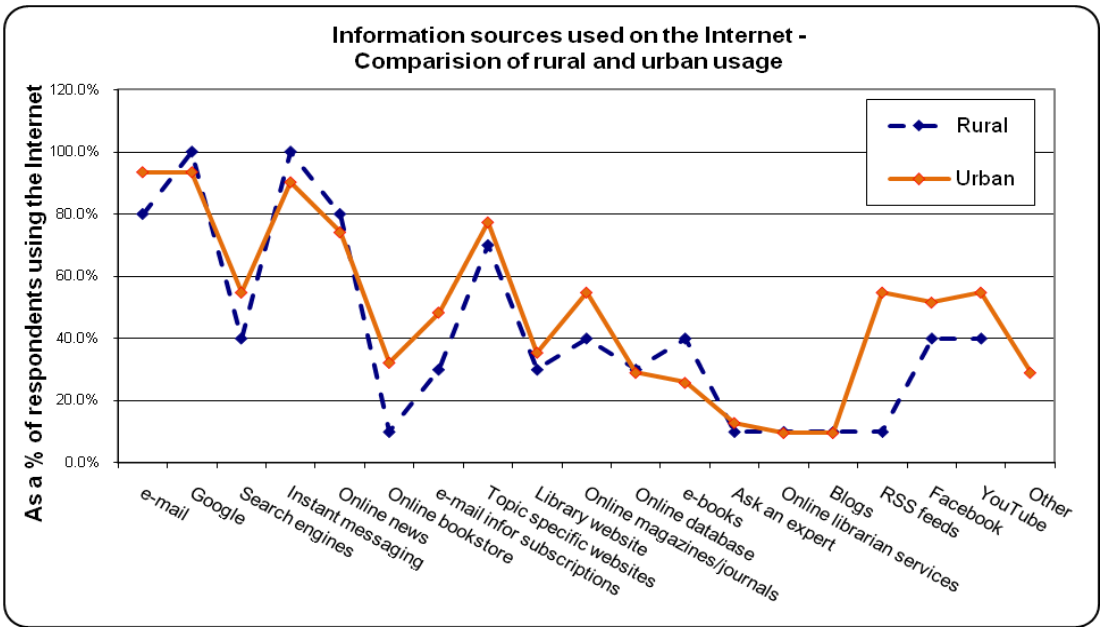


Figure 5.5: Comparison of the usage of Internet information sources

In summary, Google™ and instant messaging are the most popular in both communities, with online librarian, ask an expert, and blogs being the least popular. The notable differences in the communities are mainly in the higher percentage of people in the urban community using RSS feeds, online bookstores, Facebook™, and online magazines/journals when compared with the rural community.

The participants were asked in Q33 to rate the variety of computer uses as presented in Table 5.18 below. The purpose of this question was to gauge the main reasons for using a computer and/or the Internet by both communities.

Rural community	Most often		Often		Rarely		Never		Not applicable		Missing	
Work related purposes	12	23.5%	2	3.9%	1	2.0%	6	11.8%	27	52.9%	3	5.9%
Managing finances (household)	0	0.0%	0	0.0%	4	7.8%	13	25.5%	27	52.9%	7	13.7%
Communicate with friends/relatives	5	9.8%	1	2.0%		0.0%	11	21.6%	27	52.9%	7	13.7%
For local news	5	9.8%	1	2.0%	2	3.9%	10	19.6%	27	52.9%	6	11.8%
For news around the world	3	5.9%	4	7.8%	1	2.0%	10	19.6%	27	52.9%	6	11.8%
Find general information	5	9.8%	3	5.9%	1	2.0%	10	19.6%	27	52.9%	5	9.8%
Entertainment (eg. Games, movies)	7	13.7%	4	7.8%	3	5.9%	6	11.8%	27	52.9%	4	7.8%
Urban community	**Most often**		**Often**		**Rarely**		**Never**		**Not applicable**		**Missing**	
Work related purposes	21	43.8%	4	8.3%	3	6.3%	3	6.3%	12	25.0%	5	10.4%
Managing finances (household)	2	4.2%	4	8.3%	5	10.4%	9	18.8%	12	25.0%	16	33.3%
Communicate with friends/relatives	21	43.8%	6	12.5%	2	4.2%	1	2.1%	12	25.0%	6	12.5%
For local news	20	41.7%	9	18.8%	1	2.1%	2	4.2%	12	25.0%	4	8.3%
For news around the world	18	37.5%	8	16.7%	2	4.2%	1	2.1%	12	25.0%	7	14.6%
Find general information	20	41.7%	9	18.8%		0.0%	1	2.1%	12	25.0%	6	12.5%
Entertainment (eg. Games, movies)	18	37.5%	5	10.4%	5	10.4%	3	6.3%	12	25.0%	5	10.4%

Table 5.18: The use of computer/Internet, where it is used

Among the respondents who had access to these facilities, it is noted that the rural community made less use of the computer/Internet than the urban community. This data is presented graphically in Figure 5.6 below.

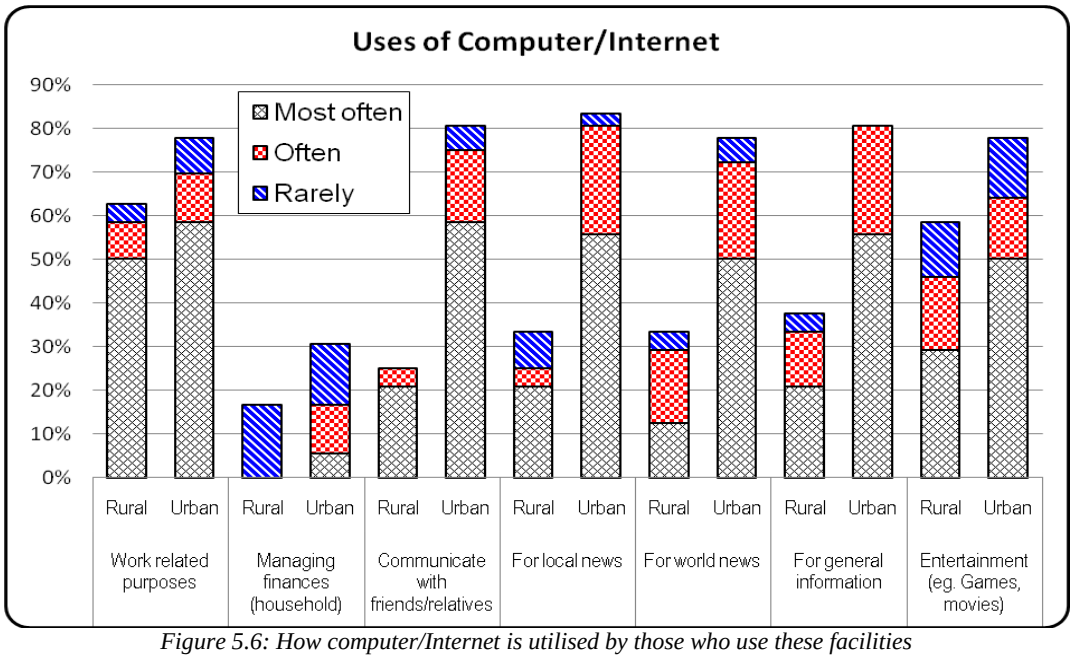


Figure 5.6: How computer/Internet is utilised by those who use these facilities

The calculation for this output has been based on those participants who stated that they had access to a computer and/or the Internet and is made up of 24 of the rural and 36 urban respondents. These results show that computer/Internet use was generally at work for work purposes in both communities as reflected in the "most often" answers. The urban community utilised these facilities for communication with friends and relatives more than the rural community. These results have relevance to the level of access to the Internet as the Internet related categories show a greater difference between both communities, for example, accessing local or world-wide news, or communication with friends/relatives.

These results also establish that accessing the Internet was a significant use of the computer, more so in the urban community. A cross tabulation for those who used a computer and also accessed the Internet, for both communities, is presented in Table 5.19 below.

Rural community (5 respondent did not answer either or both)		**Use the Internet?**			**Total**
		Yes	**No**	**Not applicable**	
Ever used a computer?	Yes	9	10	7	**26**
	No	0	10	10	**20**
Total		**9**	**20**	**17**	**46**
Urban community (3 respondent did not answer either or both)		**Use the Internet?**			**Total**
		Yes	**No**	**Not applicable**	
Ever used a computer?	Yes	30	2	2	**34**
	No	0	8	3	**11**
Total		**30**	**10**	**5**	**45**

*Table 5.19: Cross tabulation - Ever used a computer? * Use the Internet?*

Only 9 of the 26 rural respondents who used computers also used the Internet while 30 of the 34 urban respondents who used computers also used the Internet.

5.4.4 Reading

The next category of questions in the section on *access to information* was on *reading*. Questions 35 and 36 relate to what the surveyed communities read and how often they read. To establish the relevance of what was being read, it was important to understand the language capabilities, especially foreign language proficiency. This issue was addressed in Q34. Further questioning, Q37 to Q41, addressed availability of reading material.

Question 34, on language proficiency, was presented as a categorical question with optional answers. The languages that were included in the question were Dhivehi, English, Arabic, Hindi, and Urdu as these are the main languages that Maldivians are familiar with, and this is in varying degrees. It was anticipated that there might be some people with other European languages, or even Japanese, since the Maldives is a popular tourist destination. However, to keep the questionnaire as simple as possible, other languages were not included, but an "other" option was provided. Only two respondents, one from each community, used the "other" option. The respondent from the rural community ticked the "poor" category for "other", but did not specify which language it was. The respondent from the urban community also ticked the "poor" category and specified the language as Sinhalese.

Question 34 was answered by all of the rural respondents and all but one from the urban community. However, there were only a few respondents who ticked all of the required boxes. It was noted that some respondents answered the categories except for "not at all". Here again it can be assumed that people did not bother ticking the "not at all" boxes for those who were not familiar with a given language. The results for this set of data are shown in Table 5.20 below.

Rural community		**Dhivehi**		**English**		**Arabic**		**Hindi**		**Urdhu**		**Other**	
If able to read, write & speak	*Proficient*	43	84.3%	6	11.8%		0.0%		0.0%		0.0%		0.0%
	Average	6	11.8%	11	21.6%	1	2.0%	1	2.0%	1	2.0%		0.0%
	Poor		0.0%	20	39.2%	6	11.8%	2	3.9%	2	3.9%	1	2.0%
Can only understand & speak		1	2.0%	2	3.9%		0.0%	6	11.8%		0.0%		0.0%
Can only read and write			0.0%	1	2.0%	32	62.7%		0.0%		0.0%		0.0%
Can only read			0.0%	1	2.0%	1	2.0%	1	2.0%	1	2.0%		0.0%
Not at all			0.0%	8	15.7%	4	7.8%	29	56.9%	25	49.0%	13	25.5%
Missing		1	2.0%	2	3.9%	7	13.7%	12	23.5%	22	43.1%	37	72.5%
Urban community		**Dhivehi**		**English**		**Arabic**		**Hindi**		**Urdhu**		**Other**	
If able to read, write & speak	*Proficient*	39	81.3%	23	47.9%	1	2.1%	1	2.1%		0.0%		0.0%
	Average	5	10.4%	10	20.8%	2	4.2%	1	2.1%		0.0%		0.0%
	Poor	1	2.1%	4	8.3%	1	2.1%	2	4.2%		0.0%	1	2.1%
Can only understand & speak			0.0%	1	2.1%	1	2.1%	18	37.5%	4	8.3%		0.0%
Can only read and write		1	2.1%	1	2.1%	16	33.3%	2	4.2%	1	2.1%		0.0%
Can only read			0.0%		0.0%	5	10.4%		0.0%	1	2.1%		0.0%
Not at all			0.0%	3	6.3%	7	14.6%	10	20.8%	17	35.4%	8	16.7%
Missing		2	4.2%	6	12.5%	15	31.3%	14	29.2%	25	52.1%	39	81.3%

Table 5.20: Level of language proficiency

It was found that 6 (11.8%) of the rural respondents and 23 (47.9%) urban respondents considered themselves "proficient" in the English language. Another 20 (39.2%) rural

respondents and 4 (8.3%) urban respondents stated that their English language skills were "poor". Another important observation was that 8 (15.7%) of the rural respondents and 3 (6.3%) from the urban community responded that they did not have any English language skills, with another 2 (3.9%) rural respondents and 6 (12.5%) urban respondents not answering this section of the question at all.

The data in Table 5.20 show that the majority of the participants (84.3% from the rural community and 81.3% from the urban) were proficient in Dhivehi language. None of the respondents stated they were illiterate in Dhivehi language. However, the missing response to this category from the rural community and the 2 urban respondents who did not answer any part of this question could have meant "not at all".

Of the combined 99 respondents from both communities, only one person (from the rural community) identified as being "proficient" in the Arabic language. Six (11.8%) rural respondents and one (2.1%) urban respondent stated their Arabic language skills were "poor" while 32 (62.7%) rural respondents and 16 (33.3%) urban respondents stated they could only read and write in Arabic without comprehending its meaning. Another person from the rural community and 5 from the urban community stated they could only read Arabic script.

Another significant aspect of language skills is that 6 (11.8%) rural and 18 (37.5%) urban respondents identified themselves as having the ability to understand and speak Hindi language.

Leading on from the question on language proficiency, the respondents were asked in Q35 what they read. This question was presented as a list of probable reading material in a Likert-style response with "regularly", "occasionally", "rarely", and "never". An "other" option was also provided in case a respondent read something other than what was on the list. The results for this question are presented in Table 5.21 below.

Rural community	**Regularly**		**Occasionally**		**Rarely**		**Never**		**Missing**	
Local magazines	20	39.2%	12	23.5%	11	21.6%	3	5.9%	5	9.8%
Foreign magazines	2	3.9%	5	9.8%	7	13.7%	23	45.1%	14	27.5%
Local fiction books	9	17.6%	10	19.6%	14	27.5%	9	17.6%	9	17.6%
English fiction books		0.0%	4	7.8%	7	13.7%	23	45.1%	17	33.3%
Newspaper (print)	14	27.5%	9	17.6%	11	21.6%	11	21.6%	6	11.8%
Newspaper (online)	5	9.8%	2	3.9%	3	5.9%	27	52.9%	14	27.5%
Books (non-fiction)	13	25.5%	14	27.5%	12	23.5%	5	9.8%	7	13.7%
Other	1	2.0%	2	3.9%	4	7.8%	8	15.7%	36	70.6%
Urban community	**Regularly**		**Occasionally**		**Rarely**		**Never**		**Missing**	
Local magazines	15	31.3%	5	10.4%	9	18.8%	9	18.8%	10	20.8%
Foreign magazines	15	31.3%	9	18.8%	5	10.4%	7	14.6%	12	25.0%
Local fiction books	7	14.6%	2	4.2%	7	14.6%	16	33.3%	16	33.3%
English fiction books	16	33.3%	5	10.4%	6	12.5%	7	14.6%	14	29.2%
Newspaper (print)	26	54.2%	8	16.7%	4	8.3%	4	8.3%	6	12.5%
Newspaper (online)	13	27.1%	10	20.8%	2	4.2%	9	18.8%	14	29.2%
Books (non-fiction)	11	22.9%	13	27.1%	2	4.2%	4	8.3%	18	37.5%
Other	3	6.3%	1	2.1%		0.0%	7	14.6%	37	77.1%

Table 5.21: Level of reading in both communities

Two rural respondents did not tick any of the options, but wrote "school texts" in the "other" category, while the other person wrote "do not read". Many respondents left the "never" column blank, ticking other options where appropriate. From this, it is safe to assume that the data as shown missing are in fact "never" answers. Taking these two factors into consideration, everyone, except one participant from the urban community, answered this question.

Twenty (39.2%) of the rural respondents stated that they read local magazines "regularly", while this was true for 15 (31.3%) respondents from the urban community. While only 3 (5.9%) rural participants stated that they "never" read local magazines, 5 (9.8%) left this component blank – which can be assumed as a "never". In the urban community 9 (18.8%) of the respondents stated that they "never" read local magazines while 10 (20.8%) did not respond to this component of the question.

The readership of foreign magazines was higher in the urban community with 2 (3.9%) rural respondents versus 15 (31.3%) urban respondents reading these "regularly". The results show that 72.6% of the rural respondents (23 who stated "never" and 14 who did not answer) did not read foreign magazines at all. In the urban community only 7 (14.6%) stated they "never" read foreign magazines with another 12 (25.0%) providing no answer to this component.

A similar pattern to that of reading of magazines can also be seen for fiction reading, with more respondents in the rural community reading local fiction while more respondents in the urban community read English fiction. Thirty nine (78.4%) rural respondents (23 who stated "never" and 17 who did not answer this component) do not read English fiction.

Newspaper reading, in both print and online versions, was more common in the urban community. Twenty six (54.2%) urban respondents read newspapers "regularly", while only 14 (27.5%) rural respondents were "regular" newspaper readers. While 11 (21.6%) from rural community responded as "never" reading newspapers, this was true for only 4 (8.3%) of the urban respondents. Thirteen (27.1%) respondents from the urban community stated they read the newspaper online, while only 5 (9.8%) rural respondents did this. While 27 (52.9%) rural community respondents stated they "never" read the newspaper online, only 9 (18.3%) urban respondents were identified in this category.

The books (non-fiction) category presented in this question does not differentiate between books in Dhivehi and other languages. However, it was clear from a later question (Q40) that the books (non-fiction) category presented in Table 5.21 mainly includes Dhivehi books. The data for Q40 will follow later in this section.

The reading group in the urban community is comparatively higher than in the rural community. For easier comparison, the positive responses of "regularly" and "occasionally" were added to present a composite index of how many people read each type of reading material. The finding for this set of data is reproduced in Figure 5.7 below.

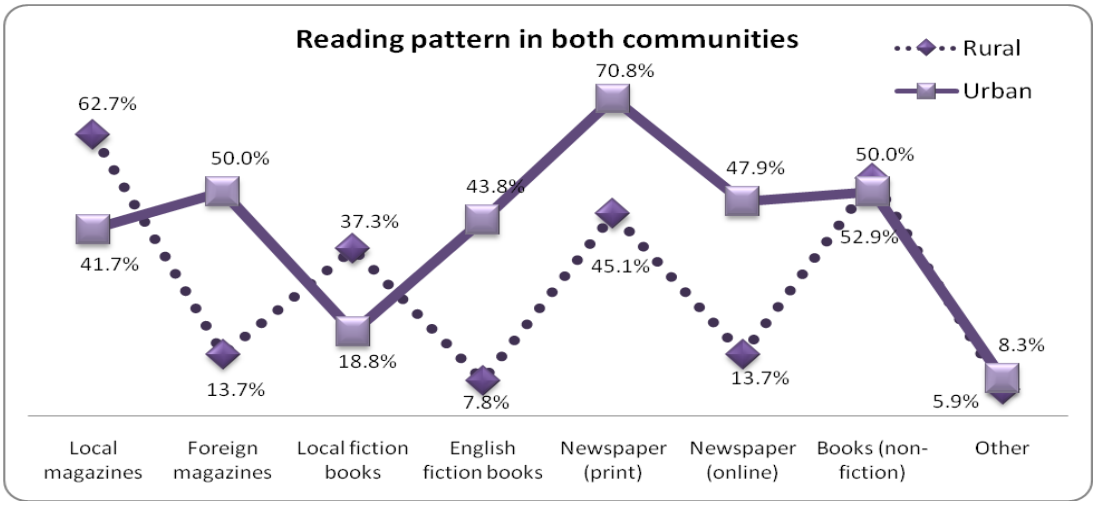


Figure 5.7: Reading pattern (combined responses for "regularly" and "occassionally")

Overall, it appears that more urban community respondents read. However, more rural respondents read local material like local magazines and local fiction books.

Cross tabulation of responses for Q3 on their education level and Q35 on what is read, across both communities, shows that educational level of the participants may have some relevance on the reading habits. This data is presented in Table 5.22 below.

Educational level (Q3)	Those who read "regularly" or "occasionally" (Q35)												Total # of respondents in the group	
	local magazines		foreign magazines		local fiction books'		English fiction books		newspapers (print)		newspapers (online)			
Basic literacy	2	29%	0	0%	1	14%	0	0%	3	43%	0	0%	7	7%
Primary	19	61%	0	0%	10	32%	1	3%	15	48%	1	3%	31	31%
Secondary	19	56%	13	38%	9	26%	11	32%	19	56%	16	47%	34	34%
Higher secondary	5	33%	9	60%	4	27%	6	40%	10	67%	6	40%	15	15%
Diploma / AdvDip.	4	67%	6	100 %	2	33%	4	67%	5	83%	4	67%	6	6%
University	2	40%	3	60%	1	20%	3	60%	4	80%	3	60%	5	5%
Missing													1	1%
Total	**51**	52%	**31**	32%	**27**	28%	**25**	26%	**56**	57%	**30**	31%	**99**	**100 %**

Table 5.22: Educational level of the respondents and what they read

The data in Table 5.22 show that the main reading by the respondents with "basic literacy" is newspapers (in print) with 3 (43%) of the 7 respondents identifying this. Among the 31 respondents with "primary" educational level, newspapers in print (48%) and local magazines (61%) are among the most read material. Reading of English fiction is very low among all age groups of 31 and above. Local fiction reading is also very low with only 28% of the respondents stating "regularly" or "occasionally" for this category.

Cross tabulation of the gender (Q1) and what is read (Q35 & Q40), across both communities, reveal that there is a differentiation in both genders in their reading habits. This data is illustrated in Figure 5.7 below.

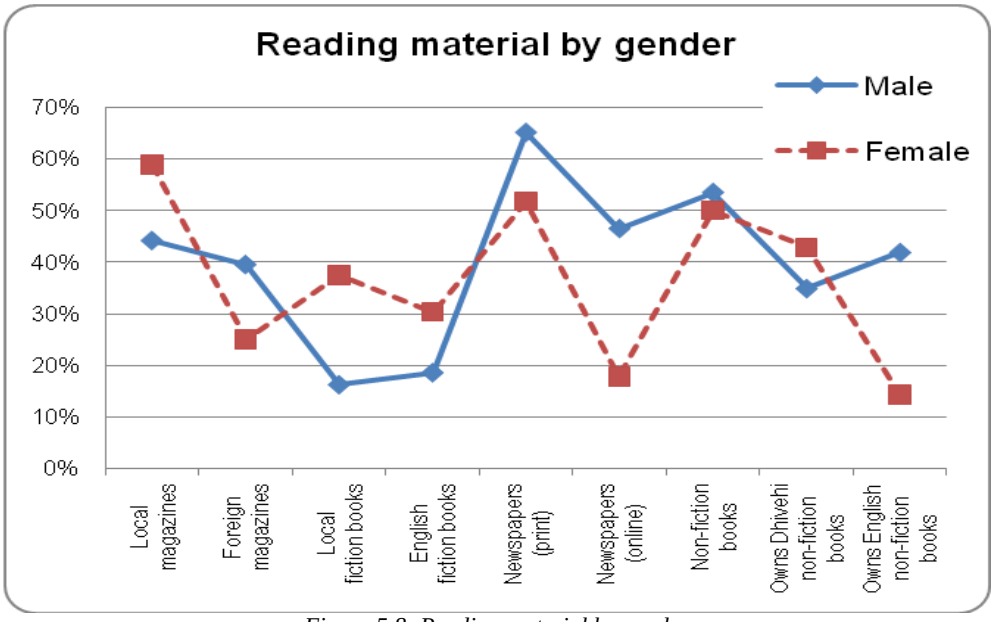


Figure 5.8: Reading material by gender

More female respondents read local magazines while more male respondents read foreign magazines. More female respondents read fiction, both local as well as English, while more male respondents read newspapers both online as well as print. In general, reading of non-fiction books appears to be similar among both genders. However, there appears to be a distinction between both genders in terms of reading of local and English non-fiction books, with more male respondents having their own copies of English non-fiction books.

Questions 36 to 41 sought to clarify the level of awareness of the respondents about the available newspaper/magazines, and to ascertain if the respondents owned books. If they did they were asked what types of books they owned, and if they did not own books it further sought to clarify the reasons for this.

Question 36 asked the respondents to list any newspaper/magazines they knew. This question was posed as open-ended as it would be impractical to try to list the possible answers. This was one of the questions with the highest non-response rate with 9 (17.6%) from the rural and 17 (35.4%) from the urban respondents not answering it. Among the rural respondents who answered this question, 6 did not list any but stated, “too many to list”, “can’t remember the names”, “daily newspapers”, “daily newspapers & weekly magazines”, “don’t know any”, and “none” respectively. Two respondents from the urban community also did not list any names. Instead, both respondents stated that they knew most of the

newspapers/magazines published in the Maldives, and one of them also stated "some international newspaper/magazines". The results have been collated in Table 5.23 below.

Local language	Rural		Urban		English language (local)	Rural		Urban	
Aafathis	27	52.9%	27	56.3%	SQ magazine	-	-	3	6.3%
Adduvas	11	21.6%	4	8.3%	Monday times	1	2.0%	-	-
Dharuma	1	2.0%	3	6.3%					
Dheenuge magu	2	3.9%	-	-					
Fanaaru	1	2.0%	-	-					
Fiya	-	-	1	2.1%					
Fiyes	6	11.8%	1	2.1%					
Haama	4	7.8%	3	6.3%					
Hafthaa	1	2.0%	-	-					
Hamaroalhi	4	7.8%	3	6.3%					
Haveeru	32	62.7%	26	54.2%					
Hukuru	1	2.0%	-	-					
Huvaas	5	9.8%	1	2.1%					
Jazeera	4	7.8%	2	4.2%	**English language (foreign)**	**Rural**		**Urban**	
Manas	5	9.8%	-	-	Cosmopolitan	-	-	1	2.1%
Miadhu	11	21.6%	17	35.4%	Fame magazine	-	-	1	2.1%
Minivan	5	9.8%	8	16.7%	Life & Style	-	-	1	2.1%
Rasrani	-	-	1	2.1%	News Today	-	-	1	2.1%
Sandhaanu	6	11.8%	1	2.1%	Newsweek	-	-	1	2.1%
Sangu	2	3.9%	1	2.1%	Readers digest	-	-	2	4.2%
Udhares	11	21.6%	6	12.5%	Times Magazine	-	-	3	6.3%

Table 5.23: The newspapers/magazines listed by the respondents

The newspapers/magazines published locally and mainly in local language are presented in the left hand section of Table 5.23; the right hand portion shows newspaper/magazines in the English language with separate sections for local publications and foreign publications. While both communities listed quite a variety of newspapers/magazines, the rural community did not list any foreign newspapers/magazines and only one rural respondent listed a local magazine in the English language. Five respondents from the urban community listed foreign magazines with 3 of them citing *Times* and two of them citing *Reader's Digest*.

Aafathis and *Haveeru*, both local daily newspapers, appear to be the most popular among the 31 different titles listed by the participants. Twenty seven (52.9%) of the rural respondents and 27 (56.3%) urban respondents listed *Aafathis* with 32 (62.7%) rural and 26 (54.2%) urban respondents listing *Haveeru*. It appears that *Adduvas* and *Udhares* are among the most popular *local weekly magazines*. Eleven (21.6%) rural respondents and 4 (8.3%) urban respondents listed *Adduvas* while 11 (21.6%) rural and 6 (12.5%) urban respondents listed *Udhares*. These results are reflective of the outcomes in reading patterns presented earlier for Q35. More rural community participants stated that they read local magazines while more urban community participants stated that they read newspapers.

The respondents were asked in the next question, Q37, whether they received any newspapers at their household. This was presented as a "yes/no" question and all of the respondents, except one from the rural community, answered this question. If they replied "no", they were then asked in Q38 to state the reason they did not subscribe to newspapers.

Question 38 was provided as a multiple-response category question with “not important”, “read news online”, “watch/listen to news on TV/radio”, “too expensive”, “not available regularly”, and “no newspaper outlets on the island”. It also provided an “other” option in case the respondents were not happy with the categories provided. This question was answered by all of the respondents who stated “no” to the previous question except one urban respondent. The results for these two questions are presented in Table 5.24 below.

Q37, Does your household receive any newspapers?	***Rural***		***Urban***	
Yes	8	15.7%	19	39.6%
No	42	82.4%	29	60.4%
Missing	1	2.0%	-	-
Total	51	100%	48	100%
Q38. If "no" could you please state why? (multiple response)	***Rural***		***Urban***	
Not important	2	3.9%	6	12.5%
Read news online	-	-	11	22.9%
Watch/listen to news on TV/Radio	6	11.8%	18	37.5%
Too expensive	4	7.8%	4	8.3%
Not available regularly	14	27.5%	1	2.1%
No newspaper outlets on this island	29	56.9%	-	-
Other	2	3.9%	3	6.3%
Not applicable	42	82.4%	29	60.4%
Missing	-	-	1	2.1%

Table 5.24: Newspaper subscription

A large number of respondents from both communities, 42 (82.4%) rural and 29 (60.4%) urban, stated that their households did not receive newspapers. The majority of the rural respondents stated non-availability as their reason for not receiving newspapers. This was made up of 29 (56.9%) respondents who stated newspapers are “not available regularly” and 14 (27.5%) who stated there were “no newspaper outlets on the island”. Additional responses ranged from 2 respondents stating “not important”, 6 stating they “received the news from TV/radio” and 4 respondents stating that newspapers are “too expensive”. Two respondents ticked the “other” category but did not explain what these were.

In the urban community, the main reason for not *receiving newspapers* at the household was cited as “watch/listen to news on TV/radio” with 18 (37.5%) respondents stating so. This was followed by 11 (22.9%) respondents who stated that they read the news online. One respondent from the urban community stated that newspapers are “not available regularly”. Compared to the 2 respondents in the rural community, 6 from the urban community stated that newspapers are “not important”. Three urban respondents also selected “other” with two of them explaining that they have access to newspapers at their workplace and one respondent stating that individual newspaper issues are bought if and when there was a need for them.

The respondents were then asked about book ownership in Q39 as a “yes/no” response. This was followed by Q40 on the types of books they own if they stated “yes”, and Q41 on why they do not own books if they stated “no”. Both of these follow-up questions were presented

as categorical questions with Q40 allowing multiple responses. One rural respondent did not answer any of these three questions while one urban community respondent did not answer the latter two questions. Table 5.25 reports the results for Questions 39 and 40.

Q39. Do you own any books?	*Rural*		*Urban*	
Yes	37	72.5%	37	77.1%
No	13	25.5%	11	22.9%
Missing	1	2.0%	-	-
Total	51	100%	48	100%
Q40. If "yes", what type of books do you own? (multiple responses)	***Rural***		***Urban***	
English fiction	9	17.6%	22	45.8%
Dhivehi fiction	19	37.3%	14	29.2%
English non-fiction	3	5.9%	20	41.7%
Dhivehi non-fiction	24	47.1%	15	31.3%
Other	1	2.0%	5	10.4%
Not applicable	13	25.5%	11	22.9%
Missing	1	2.0%	1	2.1%

Table 5.25: Book ownership

A significant number of respondents from both communities, 37 (72.5%) rural and 37 (77.1%) urban respondents, stated they own books. Among these respondents 5 urban respondents and none of the rural respondents ticked all 4 categories: “English fiction”, “Dhivehi fiction”, “English non-fiction”, and “Dhivehi non-fiction”.

More rural respondents stated they owned Dhivehi books while more urban respondents stated they owned books in English. Nine (17.6%) rural respondents and 22 (45.8%) urban respondents had “English fiction” books, and 3 (5.9%) rural respondents versus 20 (41.7%) urban respondents owned “English non-fiction” books. Nineteen (37.3%) rural respondents and 14 (29.2%) urban respondents had “Dhivehi fiction” books, and 24 (47.1%) rural respondents versus 15 (31.3%) urban respondents had “Dhivehi non-fiction” books.

The non-fiction categories for both Dhivehi and English books were also provided with a blank space to elicit the subject area/s of the books owned. These were open-ended and the answers were quite varied. They have been categorised as closely as possible into subject areas and the data is presented in Table 5.26 below.

English books	***Rural***	***Urban***	**Dhivehi books**	***Rural***	***Urban***
Accounting related		1	Linguistic	1	2
Baby books		1	Magazines	1	
Computer books		1	Religious texts	14	6
Dictionary	1	1	School texts	1	
Engineering		1			
Fishing		1			
Gardening		1			
General information		3			
History		1			
Management/Business		2			
Medical		1			
National Geography	1		**Other**	***Rural***	***Urban***
Philosophy		1	Arabic religious information	1	
School texts	1		Haveeru, Aafathis	1	
Social sciences		1	Religious texts		2

Table 5.26: Subject matter of books owned

Not all of the respondents who ticked non-fiction categories provided the subject area(s) of the books they owned. The left hand side columns in Table 5.26 presents the English non-fiction subject areas with the right hand side of the table providing subject areas of Dhivehi non-fiction books as well as those answers provided by the respondents in the "other" category of Q40.

The English books ranged from dictionaries to books on accounting, child rearing, computers, engineering, fishing, gardening, general information, history, management/business, medical, national geography and philosophy. One respondent stated the books as "school texts" and these could be on a variety of subjects. The responses for Dhivehi non-fiction categories do not cover as much variety as the English non-fiction categories. The majority of these responses were made up of answers like: religious books, religious texts, Islamic books, religious and the like. All of these similar responses have been categorised as "religious texts" for the purpose of this analysis. One rural respondent and 2 urban respondents stated linguistics as the subject area, while one respondent stated "magazines" and another stated "school texts" - in both cases these might be on a variety of subjects.

The "other" category in the question was provided in case respondents had books on other languages. This might very well be the case with the two responses of religious texts from the urban community and Arabic religious information identified by the rural community respondents. The additional answer was *Haveeru/Aafathis* (local daily newspapers).

Question 41 elicited the reason for not owning books if the respondents stated "no" to Q39. This was presented as a categorical question with likely answers in addition to an "other" option. The results are presented in Table 5.27.

Q41. If "no" to q39, could you please state why you do not own books?	***Rural***		***Urban***	
Would like to have but cannot afford	4	7.8%	3	6.3%
Have not thought about it	5	9.8%	6	12.5%
Do not have access to the right kinds of books in the bookshops	3	5.9%	-	-
Have access to sufficient reading material at the public library	2	3.9%	1	2.1%
Other	3	5.9%	4	8.3%
Not applicable	33	64.7%	33	68.8%
Missing	1	2.0%	1	2.1%

Table 5.27: Reasons for not owning books

From those respondents who were considered "not applicable" to this question having stated "yes" to Q39, 4 rural and 4 urban respondents answered Q41. A close scrutiny of their responses to Q40 show that Q41 is relevant.

Of the 13 rural respondents and 11 urban respondents who stated they did not own books, 4 rural and 3 urban respondents stated that they "would like to own books but could not

afford" to buy them. Five others from the rural community and 6 from the urban community stated they "have not thought about it". Two rural respondents and one urban respondent stated they had access to sufficient books in the public library.

Two respondents from the rural community and 2 from the urban community, who stated their reason for not owning books as "other", specified that they did not have time to read. The third person from the rural community stated they received books if and when needed, while of the other 2 respondents from the urban community who ticked the "other" category, one stated they did not have physical space for books and the other person reasoned that s/he used computers and hence books were not needed.

5.4.5 Library

The *use of a library* as a means to access information was deliberated as the next section on *access to information* with Questions 42 to 48 directed to this topic. The results for this set of questions are summarised in Table 5.28 below.

Q42. Do you have access to a public library in your community?	***Rural***		***Urban***	
Yes	7	13.7%	26	54.2%
I don't know (please go to Question 47)	2	3.9%	5	10.4%
No (please go to Question 47	42	82.4%	14	29.2%
Missing	-	-	3	6.3%
Total	51	100%	48	100%
Q43. If "yes", do you hold membership to your local library?	***Rural***		***Urban***	
Yes	4	7.8%	2	4.2%
No	18	35.3%	36	75.0%
Not applicable	29	56.9%	9	18.8%
Missing	-	-	1	2.1%
Total	51	100%	48	100.0%
Q44. Have you ever used the library?	***Rural***		***Urban***	
Yes	16	31.4%	35	72.9%
No (please go to Question 48)	7	13.7%	3	6.3%
Not applicable	28	54.9%	7	14.6%
Missing	-	-	3	6.3%
Total	51	100%	48	100.0%
Q45. If "yes", how often do you use the library?	***Rural***		***Urban***	
Daily	1	2.0%	3	6.3%
Weekly	7	13.7%	10	20.8%
Fortnightly	2	3.9%	1	2.1%
Monthly	-	-	-	-
Several times a year	1	2.0%	1	2.1%
Rarely	3	5.9%	19	39.6%
Not applicable	37	72.5%	10	20.8%
Missing		0.0%	4	8.3%
Total	51	100%	48	100.0%
Q46. Do the resources available in the library adequately meet your needs?	***Rural***		***Urban***	
Yes (please go to Question 49)	11	21.6%	27	56.3%
No (please go to Question 49)	4	7.8%	10	20.8%
Not applicable	36	70.6%	9	18.8%
Missing	-	-	2	4.2%
Total	51	100%	48	100.0%
Q47. Would you like to have access to a library?	***Rural***		***Urban***	
Yes (please go to Question 49)	43	84.3%	36	75.0%
No	4	7.8%	5	10.4%
Not sure	1	2.0%	2	4.2%
Not applicable	3	5.9%	4	8.3%
Missing	-	-	1	2.1%
Total	51	100%	48	100%

Table 5.28: Access to libraries and library use

The respondents were asked whether they had access to a public library in their community, if they were members of the library, if they did use the library and how often they used it, and additional questions on whether they were satisfied with the level of access to information in the library and whether they considered a library as an important information entity.

Seven (13.7%) rural and 25 (54.2%) urban respondents stated they had access to a public library. Another 2 rural respondents and 5 urban respondents stated they "did not know" if they had access to a library or not. Forty two (82.4%) rural and 14 (29.2%) urban respondents stated they "did not" have access. Three respondents from the urban community did not answer this question. Even though the "I don't know" and "no" respondents to Q42 were asked to skip to Question 47, many respondents did not follow this instruction.

Question 43 elicited if the respondents held membership to a library, if they stated "yes" to Q42. Four of the 7 rural respondents and 2 of the 26 urban respondents who stated they had access to a public library, stated that they held library membership.

Question 44, also as a "yes/no" response, asked them if they use the library. The results show remarkable difference in the level of library use by the communities with 16 (31.4%) rural respondents and 35 (72.9%) urban respondents stating so. Some of the main findings from this group of questions are presented graphically in Figure 5.9 below.

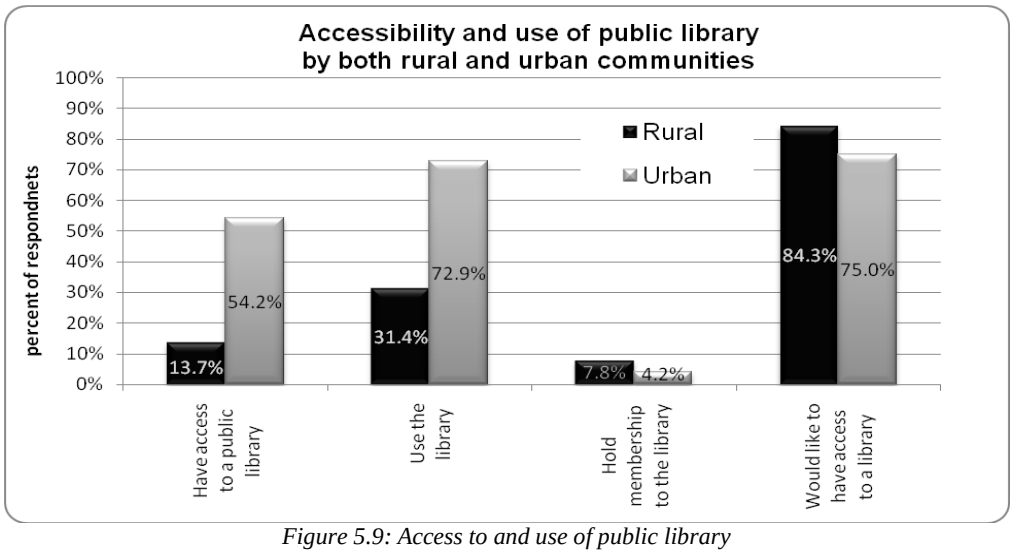


Figure 5.9: Access to and use of public library

Question 45 asked the respondents how often they used the library. Among the respondents who used the library, one rural respondent and 3 urban respondents stated they used the library "daily", while 7 rural and 10 urban respondents used the library on a "weekly" basis. Another 3 of the 16 respondents from the rural community and 19 of the 35 from the urban community who used the library, stated they "rarely" used the library.

Question 46 sought a "yes/no" response as to whether those respondents who used the library were satisfied with the library resources. Eleven (21.6%) rural respondents and 27 (56.3%) urban respondents stated "yes"–that the resources in the library adequately met their needs.

The results from Q47 reveal that the majority of the respondents from both communities would like to have access to a public library. Forty three (84.3%) rural respondents and 36 (75.0%) urban respondents ticked the "yes" category while 4 (7.8%) of the rural and 5 (10.4%) of the urban respondents stated "no" indicating they did not wish to have access to a library. One rural respondent and 2 urban respondents were "not sure" whether they wanted to have access to a library.

Question 48, presented with probable categorical answers, sought feedback on why people do not use a library or have no desire for a library if this was found to be the case based on responses to Q47. The results for Q48 are presented in Table 5.29 below.

Q48. If you have never used a library (Q44), or do not want to use a library (Q47), please state why.	***Rural***		***Urban***	
Have not had any need to use a library	3	5.9%	2	4.2%
Did not realize it can be used by adults	-	-	2	4.2%
Difficult procedure to get membership	1	2.0%	-	-
Do not really know what a library does	-	-	-	-
Other	1	2.0%	7	14.6%
Not applicable	42	82.4%	32	66.7%
Missing	4	7.8%	5	10.4%
Total	51	100.0	48	100.0%
"Other" reasons for not using the library or not having a desire for a library	***Rural***		***Urban***	
I am too old	1			
Do not have the required books in library			1	
I get information from the Internet			3	
Have enough information in my own books - buy enough			1	
No time to read			1	

Table 5.29: Reasons for not using the public library

This question (Q48) was not applicable to 42 rural and 32 urban respondents as they, in previous questions, stated either that they used a library or that they would like to have access to a library. Of the 9 remaining respondents from the rural community and 16 from the urban community, 4 of the rural and 5 of the urban respondents did not answer this question. Three of the 5 respondents from the rural community and 2 of the 11 respondents from the urban community stated they "have not had any need to use a library" as their reason. Two others from the urban community stated that they "did not know the library was for adults", and a third respondent stated that the "membership procedure was too difficult". Additionally, one respondent from the rural community and 7 from the urban community ticked the "other" category. These answers also are tabulated in Table 5.29 above. One respondent from the urban community did not specify the reason.

5.5 Part III: Information needs and use

The third part in the questionnaire was dedicated to identify the *information needs and use* of the communities. In this regard, the first section focuses on the types of *information sought* and *information sources* used. The second and third section deals with what *values* they place on information and information sharing.

5.5.1 Information sources

The questions presented in the first section (Q49 to Q57) focused on information sources, used or consulted for a variety of every-day-life information situations.

Question 49 sought the information sources needed for day-to-day activities in general. The question carried a list of possible information sources with an additional "other" category for any other sources the respondents might identify. The respondents were given the option of identifying as many as they wanted. The results are presented in Table 5.30 below.

Q49. Which of the following information do you need for your day-to-day activities?	*Rural*		*Urban*	
Information on fishing	13	25.5%	8	16.7%
Information about agriculture	10	19.6%	6	12.5%
Family planning information	20	39.2%	12	25.0%
Health related information	26	51.0%	21	43.8%
Knowledge about the world	31	60.8%	36	75.0%
Financial/loan assistance	11	21.6%	14	29.2%
Information on parenting	26	51.0%	16	33.3%
Information on entertainment	23	45.1%	19	39.6%
Other	4	7.8%	13	27.1%
Missing	3	5.9%	1	2.1%
Other - specified by the respondents	***Rural***		***Urban***	
Business / sales, economics	1	2.0%	3	6.3%
General information		0.0%	1	2.1%
Information related to assignments		0.0%	1	2.1%
Nothing specific	1	2.0%	2	4.2%
Religious information		0.0%	2	4.2%
Security issues		0.0%	1	2.1%
Fish processing	1	2.0%		0.0%
Technology		0.0%	1	2.1%
Cooking	1	2.0%		0.0%
Total	4		11	

Table 5.30: Information requirement for day-to-day activities

The largest percentage of respondents reported that they needed "information about the world", with 31 (60.8%) rural respondents and 36 (75%) urban respondents stating so. This was followed by "health related information" with 26 (51%) rural and 21 (43.8%) urban respondents reporting this. The least sought information from both communities was "information about agriculture" with 10 (19.6%) rural and 6 (12.5%) urban respondents responding thus. Figure 5.10 below, is a graphic representation of the information needs of both communities.

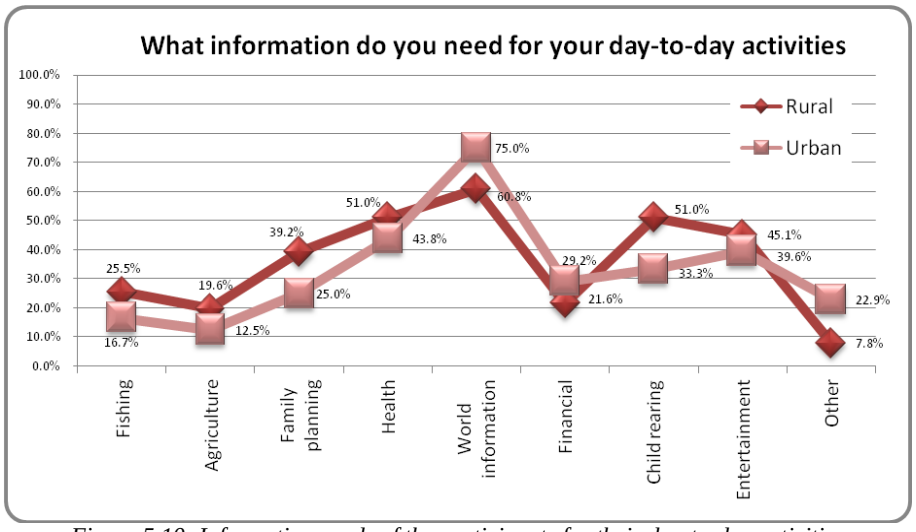


Figure 5.10: Information needs of the participants for their day-to-day activities

The figures for the urban community for information on fishing, agriculture, family planning, health issues, entertainment, and child rearing follow the same pattern as that for the rural community, but with slightly more participants from the rural community identifying with these. Slightly more respondents from the urban community identified the need for knowledge about the world and financial/loan assistance information, compared to respondents from the rural community.

In the rural community, there was a greater tendency for the respondents to stay within the proposed listing of information areas with only 4 respondents identifying "other" areas, which included sales, fish processing, and culinary skills while one person stated "nothing specific". Comparatively, 13 of the urban respondents were not happy with the proposed listing and in the "other" category added information areas such as business & economics, general information, study related, security issues, and technology.

Question 50 asked what information sources met their needs. This question was presented as a multiple response question with 7 categories of sources, and an "other" option for any additional sources that the respondents might identify. The categories and the results are presented in Table 5.31 below.

Q50. Which of the following sources of information meet your demand?	***Rural***		***Urban***	
My own experience	20	39.2%	20	41.7%
Friends/neighbours	24	47.1%	19	39.6%
Radio	29	56.9%	21	43.8%
Television	36	70.6%	35	72.9%
Newspaper	21	41.2%	26	54.2%
Library/information centre	4	7.8%	5	10.4%
Internet	8	15.7%	29	60.4%
Other	1	2.0%	4	8.3%
Missing	3	5.9%	1	2.1%
Other - specified by the respondents	***Rural***		***Urban***	
Books	-	-	1	2.1%
Family members	-	-	1	2.1%
Seminars	-	-	1	2.1%
Total	-	-	3	

Table 5.31: Information sources that meet information needs of the respondents

Three rural respondents and one urban respondent did not answer this question. Television appears to be the main source of information with 36 (70.6%) of the rural and 35 (72.9%) of the urban respondents identifying it as the source that met their information needs. This is followed by radio for the rural community with 29 (56.9%) respondents, and the Internet for the urban community with 29 (60.4%) of the respondents stating thus.

Friends/neighbours play a greater role as an information source in the rural community compared with the urban community, with 24 (47.1%) rural and 19 (39.6%) urban respondents using this source. The role of newspapers as an information source is slightly higher in the urban community with 21 (41.2%) rural respondents versus 26 (54.2%) urban respondents stating newspapers met their information needs. The library/information centre falls behind on the list of information sources in both communities with only 4 (7.8%) rural and 5 (10.4%) urban respondents stating this met their information needs.

Questions 51 to 56 sought information on the sources of information that met specific information needs as presented in each of these questions, including information on news, health, alternative methods of medicine, employment, and community services. This set of questions was presented with possible categories of information sources with an "other" option. The respondents were asked to select one answer from "most often", "often", "rarely", and "never" for each of the categories.

Question 51 sought information on the sources used by the respondents to keep up-to-date with *news*. The results for Q51 are presented in Table 5.32.

		Most often		Often		Rarely		Never		Missing	
Television	Rural	36	70.6%	7	13.7%	3	5.9%	1	2.0%	4	7.8%
	Urban	41	85.4%	1	2.1%	1	2.1%	2	4.2%	3	6.3%
Radio	Rural	22	43.1%	6	11.8%	8	15.7%	7	13.7%	8	15.7%
	Urban	25	52.1%	2	4.2%	6	12.5%	5	10.4%	10	20.8%
Newspapers (print)	Rural	7	13.7%	13	25.5%	8	15.7%	6	11.8%	17	33.3%
	Urban	21	43.8%	6	12.5%	7	14.6%	2	4.2%	12	25.0%
Newspapers (online)	Rural	4	7.8%	3	5.9%	2	3.9%	22	43.1%	20	39.2%
	Urban	14	29.2%	8	16.7%	1	2.1%	6	12.5%	19	39.6%
Internet	Rural	6	11.8%	2	3.9%	1	2.0%	23	45.1%	19	37.3%
	Urban	20	41.7%	6	12.5%	4	8.3%	4	8.3%	14	29.2%
Family/Friends	Rural	13	25.5%	17	33.3%	7	13.7%	1	2.0%	13	25.5%
	Urban	18	37.5%	8	16.7%	4	8.3%		0.0%	18	37.5%
Neighbours	Rural	10	19.6%	16	31.4%	6	11.8%	3	5.9%	16	31.4%
	Urban	8	16.7%	8	16.7%	8	16.7%	4	8.3%	20	41.7%
Other	Rural	2	3.9%	1	2.0%	4	7.8%	12	23.5%	32	62.7%
	Urban		0.0%		0.0%	1	2.1%	7	14.6%	40	83.3%

Table 5.32: Information sources used to keep up-to-date with news

All of the respondents ticked at least one of the categories of this question; hence it can be assumed that the categories that have been left blank are "never" used.

The most popular source of information for news appears to be television with 46 (90.2%) rural and 43 (89.6%) urban respondents selecting either "most often", "often", or "rarely". The majority of these responses were made up of "most often" with 70.6% of the rural respondents and 85.4% of the urban respondents. The second popular news source for both communities was radio with 22 (43.1%) of the rural respondents and 25 (52.1%) urban respondents indicating "most often" for this category.

Reliance on newspapers (print), the Internet, and family/friends as a source of information on news appears to be at a similar level for the urban community respondents, with 21 (43.8%), 20 (41.70%), and 18 (37.5%) respondents selecting these respectively. Reliance on informal channels of information as a source of news is slightly higher in the rural community with 37 (72.5%) indicating family/friends and 32 (62.7%) indicating neighbours.

The least used information source for news by the rural community respondents was the Internet and online newspapers while for the urban community the least used resources were online newspapers and neighbours. However, it should be noted that in the urban community, even the least used source–online newspapers–received favourable responses with 47.9% (combined "most often", "often", and "rarely") compared to the rural community with 17.6% for the same category. Figure 5.11 illustrates the data from Q51 graphically.

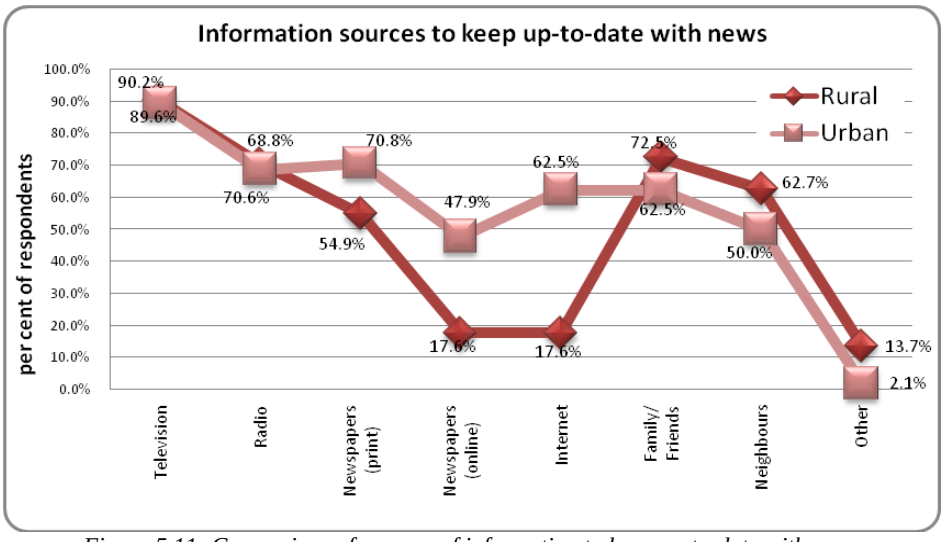


Figure 5.11: Comparison of sources of information to keep up-to-date with news

Question 52 sought information on the *sources* used by the respondents to find information on health issues. The results for Q52 are presented in Table 5.33.

		Most often		Often		Rarely		Never		Missing	
Doctor / Health Worker	Rural	32	62.7%	9	17.6%	8	15.7%		0.0%	2	3.9%
	Urban	24	50.0%	2	4.2%	5	10.4%	1	2.1%	16	33.3%
Family/Friends	Rural	9	17.6%	18	35.3%	4	7.8%	10	19.6%	10	19.6%
	Urban	14	29.2%	7	14.6%	3	6.3%	2	4.2%	22	45.8%
Neighbours	Rural	4	7.8%	11	21.6%	12	23.5%	12	23.5%	12	23.5%
	Urban	1	2.1%	2	4.2%	7	14.6%	7	14.6%	31	64.6%
Television	Rural	23	45.1%	14	27.5%	3	5.9%	4	7.8%	7	13.7%
	Urban	18	37.5%	6	12.5%	5	10.4%	4	8.3%	15	31.3%
Radio	Rural	15	29.4%	15	29.4%	3	5.9%	10	19.6%	8	15.7%
	Urban	13	27.1%	5	10.4%	4	8.3%	7	14.6%	19	39.6%
Newspapers	Rural	8	15.7%	10	19.6%	3	5.9%	16	31.4%	14	27.5%
	Urban	15	31.3%	5	10.4%	5	10.4%	6	12.5%	17	35.4%
Internet	Rural	4	7.8%	2	3.9%	3	5.9%	26	51.0%	16	31.4%
	Urban	20	41.7%	5	10.4%	2	4.2%	3	6.3%	18	37.5%
Books (personal)	Rural	6	11.8%	12	23.5%	5	9.8%	13	25.5%	15	29.4%
	Urban	10	20.8%	6	12.5%	2	4.2%	6	12.5%	24	50.0%
Library	Rural		0.0%		0.0%	3	5.9%	28	54.9%	20	39.2%
	Urban	3	6.3%	2	4.2%	2	4.2%	9	18.8%	32	66.7%
Other	Rural	1	2.0%		0.0%	2	3.9%	13	25.5%	35	68.6%
	Urban	2	4.2%		0.0%	1	2.1%	7	14.6%	38	79.2%

Table 5.33: Information sources used for information on health issues

All of the respondents in both communities answered this question by indicating at least one category of information source. A graphical comparative illustration of the results appears in Figure 5.12. The answers for all responses of "most often", "often", and "rarely" have been added up to represent "use" of the sources.

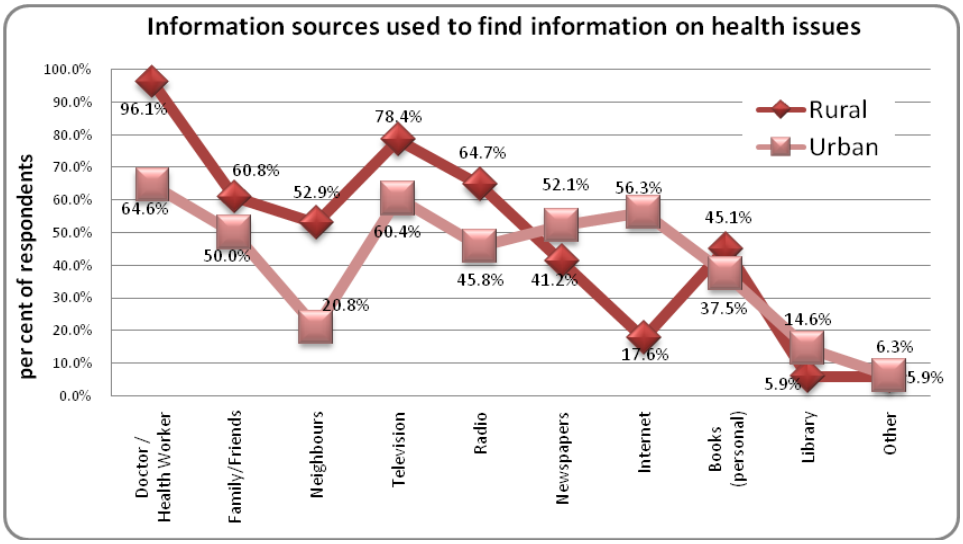


Figure 5.12: Comparison of sources of information on health issues

In both communities doctor/health worker is seen as the main source of information on health issues. However, the rural community, with 32 (62.7%) respondents stating "most often" places more emphasis on this information source than the urban community, with 24 (50.0%) urban respondents stating the same. The combined results, as represented in Figure 5.12 above, show that 96.1% of rural respondents and 64.6% of the urban respondents receive information on health issues from doctors/health workers.

In the rural community the second most used health information source was television with a 78.4% (23 "most often", 14 "often", and 3 "rarely") of the respondents identifying with this

category. The third most reliable source for health information for the rural community appears to be the radio with 64.7% (made up of 15 "most often", 15 "often", and 3 "rarely") of the respondents, followed by family/friends with 60.8% (9 "most often", 18 "often", and 4 "rarely"). In the urban community there is not much difference between the levels of reliance on doctor/health worker (64.6%) over television (60.4%), Internet (56.3%), and newspapers (52.1%) as a health information source.

For both communities, the library is the least used health information source with 3 (5.9%) rural respondents who used the library only "rarely", and 7 (14.7%) urban respondents of whom 3 used it "most often", 2 used it "often" and 2 "rarely" used the library.

Questions 53 and 54 relate to alternative forms of medicine. In Q53, the respondents were asked to identify if they used alternative forms of medicine "often", "sometimes" or "never". Three respondents from the rural community and 5 from the urban community did not answer this question. Of the 51 rural and 48 urban respondents, 32 and 23 respondents respectively stated that they used alternative methods of medicine "sometimes". Only one respondent (from the urban community) stated the use of alternative methods of medicine for individual and family's health needs as "often".

Those respondents who stated "sometimes" or "often" to Q53 were then directed to Q54 on information sources utilised to obtain information on alternative methods of medicine. Three "missing" and one "never" respondents from the rural community and 2 "missing" and 2 "never" respondents from the urban community for Q53 did answer the follow-up question in Q54. With these 8 respondents, 36 rural and 28 urban respondents are considered to be using alternative methods of medicine. The results for Q54 are presented in Table 5.34 below.

		Most often		Often		Rarely		Never		Missing	
Traditional healer	Rural	29	*80.6%*	1	*2.8%*	4	*11.1%*	2	*5.6%*		*0.0%*
	Urban	13	*46.4%*	2	*7.1%*	6	*21.4%*	3	*10.7%*	4	*14.3%*
Books	Rural	5	*13.9%*	5	*13.9%*	3	*8.3%*	9	*25.0%*	14	*38.9%*
	Urban	7	*25.0%*	1	*3.6%*		*0.0%*	8	*28.6%*	12	*42.9%*
Internet	Rural	1	*2.8%*		*0.0%*	3	*8.3%*	14	*38.9%*	18	*50.0%*
	Urban	2	*7.1%*	1	*3.6%*		*0.0%*	9	*32.1%*	16	*57.1%*
Neighbours / friends	Rural	1	*2.8%*	3	*8.3%*	10	*27.8%*	5	*13.9%*	17	*47.2%*
	Urban	8	*28.6%*	3	*10.7%*	3	*10.7%*	4	*14.3%*	10	*35.7%*
Elders in family	Rural	10	*27.8%*	6	*16.7%*	3	*8.3%*	4	*11.1%*	13	*36.1%*
	Urban	8	*28.6%*	4	*14.3%*	3	*10.7%*	1	*3.6%*	12	*42.9%*
Radio	Rural	3	*8.3%*	4	*11.1%*	7	*19.4%*	6	*16.7%*	16	*44.4%*
	Urban	4	*14.3%*	2	*7.1%*	1	*3.6%*	9	*32.1%*	12	*42.9%*
TV	Rural	4	*11.1%*	2	*5.6%*	5	*13.9%*	7	*19.4%*	18	*50.0%*
	Urban	4	*14.3%*	1	*3.6%*		*0.0%*	10	*35.7%*	13	*46.4%*
Other	Rural	1	*2.8%*		*0.0%*	1	*2.8%*	8	*22.2%*	26	*72.2%*
	Urban		*0.0%*		*0.0%*		*0.0%*	6	*21.4%*	22	*78.6%*

Table 5.34: Information sources used for information on alternative methods of medicine

A composite index for use of the sources has been constructed by combining the "most often", "often" and "rarely" responses. The percentage has been calculated based on the

number of participants who use alternative methods of medicine. The responses from both communities are similar for all the categories with a slightly greater use of these sources by the rural community. Figure 5.13 presents a graphical representation of this data.

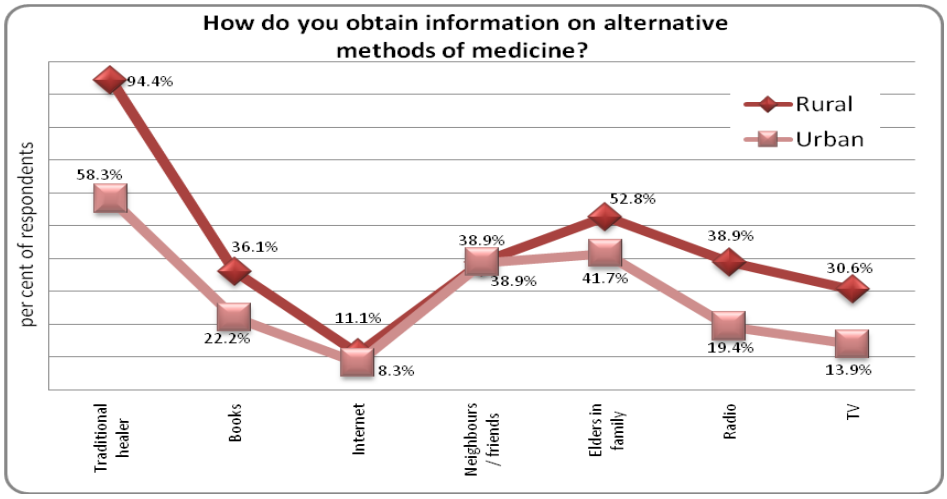


Figure 5.13: Comparison of sources for information on alternative methods of medicine

Traditional healers were the most used source for information on alternative methods of medicine by both communities with 34 (94.4%) of the rural and 21 (58.3%) urban respondents stating so. The next popular source appears to be the elderly in the family with 19 (27.8% "most often", 16.7% "often", 8.3% "rarely") rural and 8 (28.6% "most often", 14.3% "often", 10.7% "rarely") urban respondents selecting this category. As opposed to the results on news and general health information, television and the radio play a lesser role as a source of information for alternative methods of medicine in either of the communities. The least used source, in this regard, by both communities was the Internet with 4 (11.1%) of the rural respondents and 3 (8.3%) of the urban respondents stating so.

Question 55 sought information on the sources used by the respondents to find information on employment. The results for Q55 are presented in Table 5.35 below.

		Most often		Often		Rarely		Never		Missing	
Television	Rural	19	37.3%	3	5.9%	2	3.9%	6	11.8%	21	41.2%
	Urban	15	31.3%	3	6.3%	3	6.3%	7	14.6%	20	41.7%
Radio	Rural	15	29.4%	2	3.9%	2	3.9%	7	13.7%	25	49.0%
	Urban	12	25.0%	2	4.2%	3	6.3%	9	18.8%	22	45.8%
Newspapers	Rural	16	31.4%	5	9.8%	2	3.9%	4	7.8%	24	47.1%
	Urban	35	72.9%	4	8.3%		0.0%	3	6.3%	6	12.5%
Internet	Rural	5	9.8%	3	5.9%	3	5.9%	13	25.5%	27	52.9%
	Urban	9	18.8%	2	4.2%	5	10.4%	7	14.6%	25	52.1%
Family/Friends	Rural	7	13.7%	7	13.7%	7	13.7%	3	5.9%	27	52.9%
	Urban	12	25.0%	7	14.6%	3	6.3%	3	6.3%	23	47.9%
Neighbours	Rural	5	9.8%	4	7.8%	6	11.8%	6	11.8%	30	58.8%
	Urban	4	8.3%	4	8.3%		0.0%	11	22.9%	29	60.4%
Co-workers	Rural	11	21.6%	7	13.7%	4	7.8%	3	5.9%	26	51.0%
	Urban	9	18.8%	6	12.5%	3	6.3%	5	10.4%	25	52.1%
Employment services	Rural	13	25.5%	4	7.8%	4	7.8%	4	7.8%	26	51.0%
	Urban	7	14.6%	2	4.2%	4	8.3%	6	12.5%	29	60.4%
Other	Rural	2	3.9%	1	2.0%	1	2.0%	9	17.6%	38	74.5%
	Urban		0.0%		0.0%		0.0%	8	16.7%	40	83.3%

Table 5.35: Information sources used for information on employment

Television appears to be the most reliable employment information source for the rural community with 47.1% (19 “most often”, 3 “often”, and 2 “rarely”) respondents stating that they used it. This is followed by newspapers and co-workers as other popular sources of information on employment. In fact, in the rural community – apart from the Internet, radio, and neighbours – all the sources were used by almost half of the respondents. A similar pattern appears in the urban community, except for the overwhelming response for newspapers, with 39 (81.3%) of the urban respondents stating “most often” or “often” for this category.

This data is re-presented in Figure 5.14 below. The “most often”, “often”, and “rarely” responses have been combined to represent the number of respondents using these sources.

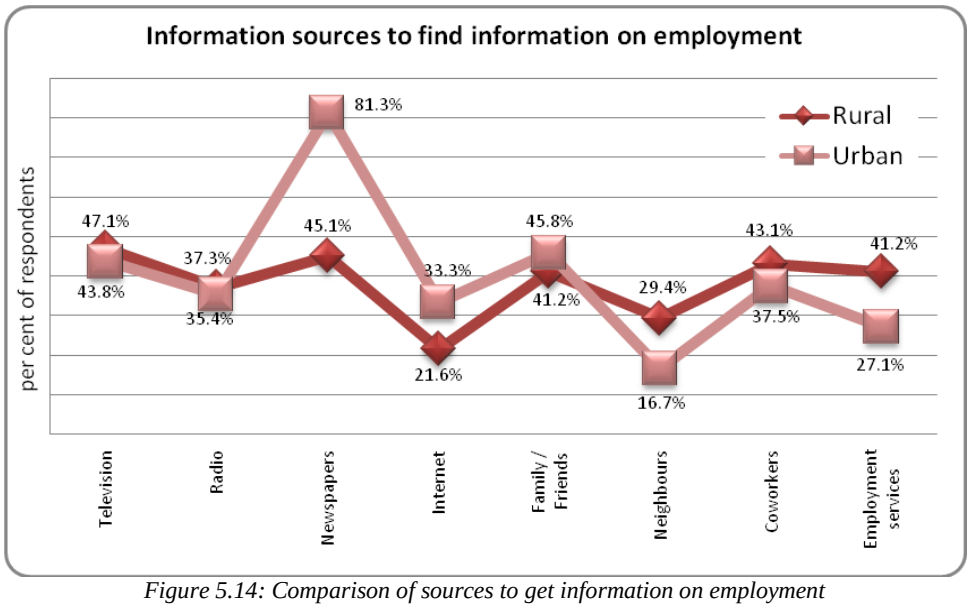


Figure 5.14: Comparison of sources to get information on employment

Question 56 sought information on the sources used by the respondents to find information on community services. The question was presented with 6 categories, requesting the respondents to select one answer from “most often”, “often”, “rarely”, and “never” for each category. The results for Q56 are presented in Table 5.36 below.

		Most often		Often		Rarely		Never		Missing	
Television	Rural	*26*	*51.0%*	*4*	*7.8%*		*0.0%*	*6*	*11.8%*	*15*	*29.4%*
	Urban	*39*	*81.3%*	*3*	*6.3%*		*0.0%*	*2*	*4.2%*	*4*	*8.3%*
Radio	Rural	17	*33.3%*	3	*5.9%*	2	*3.9%*	9	*17.6%*	20	*39.2%*
	Urban	21	*43.8%*	3	*6.3%*	3	*6.3%*	5	*10.4%*	16	*33.3%*
Newspapers	Rural	14	*27.5%*	7	*13.7%*	3	*5.9%*	9	*17.6%*	18	*35.3%*
	Urban	24	*50.0%*	7	*14.6%*	3	*6.3%*	2	*4.2%*	12	*25.0%*
Internet	Rural	5	*9.8%*	1	*2.0%*	3	*5.9%*	21	*41.2%*	21	*41.2%*
	Urban	19	*39.6%*	3	*6.3%*	2	*4.2%*	5	*10.4%*	19	*39.6%*
Family/Friends	Rural	19	*37.3%*	13	*25.5%*	8	*15.7%*	3	*5.9%*	8	*15.7%*
	Urban	9	*18.8%*	5	*10.4%*	4	*8.3%*	5	*10.4%*	25	*52.1%*
Neighbours	Rural	14	*27.5%*	10	*19.6%*	10	*19.6%*	4	*7.8%*	13	*25.5%*
	Urban	6	*12.5%*	1	*2.1%*	5	*10.4%*	10	*20.8%*	26	*54.2%*
Other	Rural	2	*3.9%*	1	*2.0%*	3	*5.9%*	10	*19.6%*	35	*68.6%*

Table 5.36: Information sources used for information on community services and activities

In the rural community, family/friends (78.4%) and neighbours (66.7%) appear to be the most used sources for information on community services. In the urban community, the most cited sources for community information are television (87.5%) and newspapers (70.8%). The least relied source by the rural community in this regard appears to be the Internet with only 17.6% (5 "most often", 1 "often", and 3 "rarely") stating so. In the urban community the least used information source was neighbours with 25% of the respondents (6 "most often", 1 "often", and 5 "rarely"). Six of the rural respondents selected the "other" option, but did not explain what these sources were.

Figure 5.15 presents a graphical representation of this data. The responses for "most often", "often", and "rarely" have been added up to show the number of respondents who use these sources.

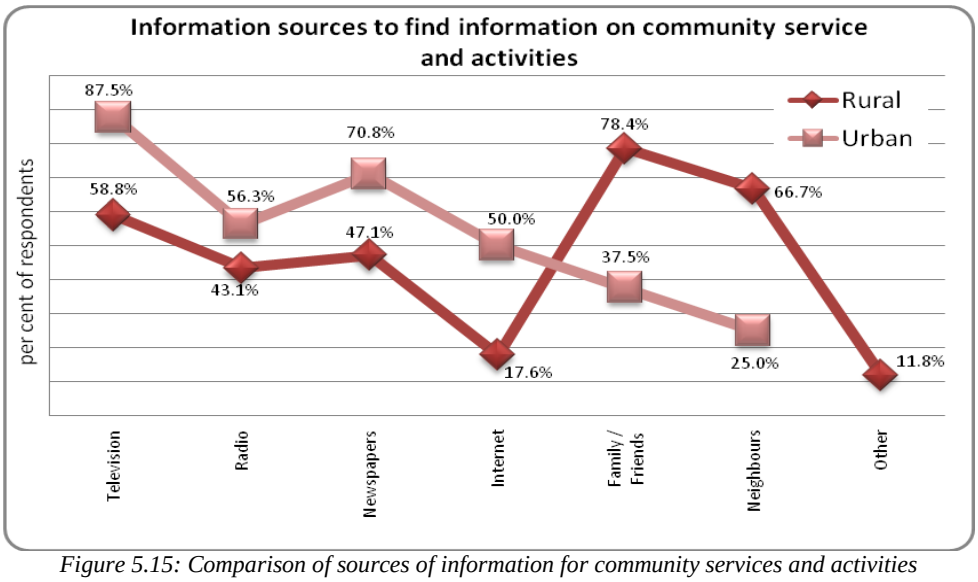


Figure 5.15: Comparison of sources of information for community services and activities

The last question (Q57) in this section on *information sources* was aimed at identifying how familiar the participants were with library, online library, bookstore, online bookstore, and the Internet as a source/place of information. Each of these sources was presented as a category and the respondents were asked to rate their level of familiarly with these sources by selecting "extremely familiar", "very familiar", "somewhat familiar", "not very familiar", "just know the name", and "don't know what that is". The results for this question are presented in Table 5.37 below.

Q57. Please rate how familiar you are with the following sources/places where you can obtain information.		Rural		Urban	
Library	Extremely familiar	11	21.6%	19	39.6%
	Very familiar	14	27.5%	10	20.8%
	Somewhat familiar	13	25.5%	3	6.3%
	Not very familiar	3	5.9%	3	6.3%
	Just know the name	4	7.8%	4	8.3%
	Don't know what that is	4	7.8%	1	2.1%
	Missing	2	3.9%	8	16.7%
Online Library	Extremely familiar	3	5.9%	12	25.0%
	Very familiar	1	2.0%	5	10.4%
	Somewhat familiar	3	5.9%	5	10.4%
	Not very familiar	3	5.9%	3	6.3%
	Just know the name	4	7.8%	5	10.4%
	Don't know what that is	29	56.9%	6	12.5%
	Missing	8	15.7%	12	25.0%
Bookstore	Extremely familiar	12	23.5%	15	31.3%
	Very familiar	14	27.5%	8	16.7%
	Somewhat familiar	11	21.6%	8	16.7%
	Not very familiar	6	11.8%	3	6.3%
	Just know the name	1	2.0%		0.0%
	Don't know what that is	3	5.9%	1	2.1%
	Missing	4	7.8%	13	27.1%
Online bookstore	Extremely familiar	2	3.9%	4	8.3%
	Very familiar	1	2.0%	6	12.5%
	Somewhat familiar	2	3.9%	7	14.6%
	Not very familiar	6	11.8%	3	6.3%
	Just know the name	4	7.8%	4	8.3%
	Don't know what that is	28	54.9%	8	16.7%
	Missing	8	15.7%	16	33.3%
Internet	Extremely familiar	5	9.8%	20	41.7%
	Very familiar	2	3.9%	10	20.8%
	Somewhat familiar	4	7.8%	3	6.3%
	Not very familiar	5	9.8%	2	4.2%
	Just know the name	7	13.7%	2	4.2%
	Don't know what that is	23	45.1%	4	8.3%
	Missing	5	9.8%	7	14.6%

Table 5.37: Familiarity with the stated information sources (library, bookstore, the Internet)

From among the information providers – library, bookstore, and the Internet – the maximum number of responses for "extremely familiar" from the rural community was received for bookstores with 12 (23.5%) respondents; followed by library with 11 (21.6%) respondents stating "extremely familiar". For the urban community, the most "extremely familiar" source appears to be the Internet with 20 (41.7%) respondents closely followed by the library with 19 (39.6%).

As shown in Table 5.37, 29 (56.9%) of the rural respondents stated they did not know what an online library was. This figure was a low of 6 (12.5%) respondents from the urban community. Additionally, 28 (54.9%) respondents from the rural community versus 8 (16.7%) of the urban respondents, stated they did not know what an online bookstore was.

Very few people from both communities stated they were "not very familiar", "just know the name", or "don't know what that it is" for libraries, with 11 rural and 8 urban respondents who selected one of these three responses.

Twenty three (45.1%) of the rural respondents in comparison with 4 (8.3%) of the urban respondents stated they did not know what the Internet was. This result was consistent with the answers from Q29 which asked them if they have ever used the Internet.

Figure 5.16 shows a graphic representation of the responses for "extremely familiar", "very familiar", and "somewhat familiar" received for each of the categories by both communities.

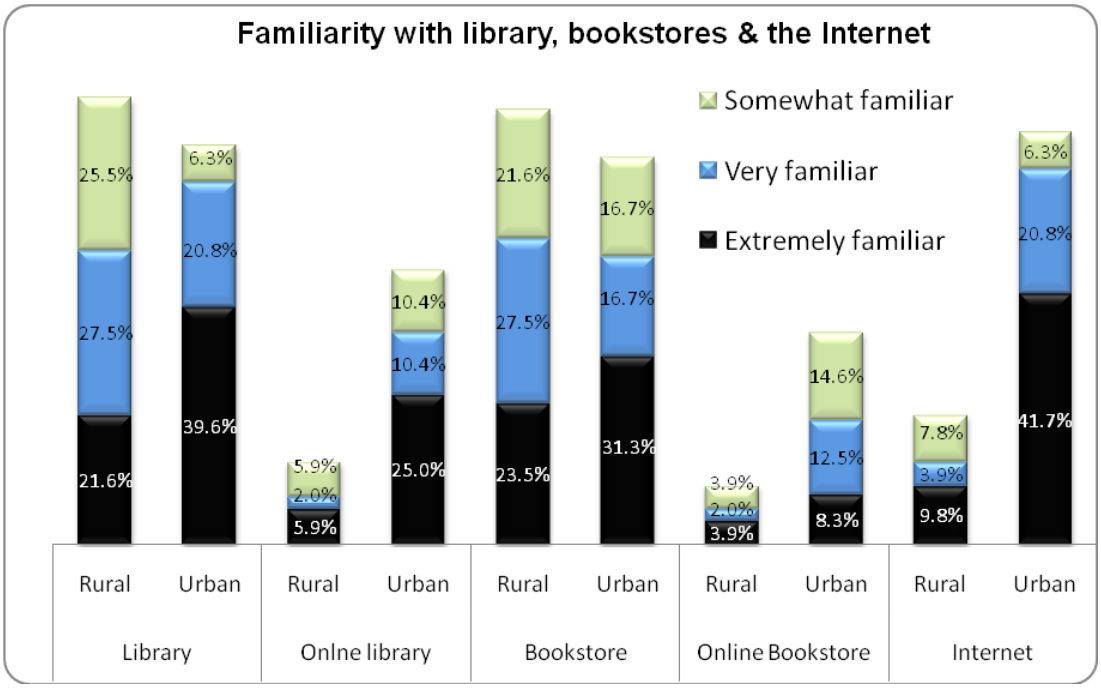


Figure 5.16: Familiarity with library, bookstores & the Internet

A comparatively low number of people from the rural community stated they were even "somewhat familiar" with the online library and online bookstore. The responses from the urban community were slightly more positive.

5.5.2 Value of information and information literacy

The next section in the *information needs and use* part of the questionnaire focussed on eliciting the *value placed on information* by the respondents. The respondents were presented with eight statements on information use (in Q58) and they were asked to scale the statements on a five-point scale of "strongly agree", "agree", "unsure", "disagree", and "strongly disagree" according to which came closest to their opinion about the statement. One respondent each from both communities did not answer any of the statements in this question. Another 5 respondents each from both communities responded to only some of the statements with 42 respondents from the urban community and 45 respondents from the rural community answering all the statements in this question. The results are presented in Table 5.38 below.

		Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree		Missing	
a. Information is the basis for informed decision-making	Rural	32	62.7%	10	19.6%	6	11.8%		0.0%	1	2.0%	2	3.9%
	Urban	43	89.6%	4	8.3%		0.0%		0.0%		0.0%	1	2.1%
b. I have access to all information I require to make personal decisions effectively	Rural	20	39.2%	21	41.2%	3	5.9%	3	5.9%	2	3.9%	2	3.9%
	Urban	*27*	56.3%	*12*	25.0%	*4*	8.3%	*2*	4.2%		0.0%	*3*	6.3%
c. I am aware of the information available within the community	Rural	26	51.0%	16	31.4%	5	9.8%	2	3.9%		0.0%	2	3.9%
	Urban	25	52.1%	13	27.1%	4	8.3%	2	4.2%	1	2.1%	3	6.3%
d. Information sources within the community adequately meet my needs	Rural	18	35.3%	15	29.4%	4	7.8%	11	21.6%	1	2.0%	2	3.9%
	Urban	15	31.3%	19	39.6%	6	12.5%	2	4.2%	3	6.3%	3	6.3%
e. I am confident in using all the information sources to which I have access to	Rural	28	54.9%	11	21.6%	6	11.8%	3	5.9%	1	2.0%	2	3.9%
	Urban	24	50.0%	13	27.1%	2	4.2%	3	6.3%	2	4.2%	4	8.3%
f. I am computer literate	Rural	12	23.5%	10	19.6%	1	2.0%	10	19.6%	15	29.4%	3	5.9%
	Urban	29	60.4%	9	18.8%		0.0%		0.0%	6	12.5%	4	8.3%
g. I am competent in using the Internet to find information	Rural	8	15.7%	5	9.8%	4	7.8%	16	31.4%	15	29.4%	3	5.9%
	Urban	29	60.4%	5	10.4%		0.0%	1	2.1%	7	14.6%	6	12.5%
g. I am competent in using the library to find information	Rural	24	47.1%	12	23.5%	4	7.8%	6	11.8%	1	2.0%	4	7.8%
	Urban	26	54.2%	5	10.4%	6	12.5%	2	4.2%	5	10.4%	4	8.3%

Table 5.38: Value of information and information literacy

Almost all of the respondents appear to agree that information is the basis for informed decision-making with only one respondent from the rural community stating "strongly disagree". Thirty two (62.7%) rural respondents "strongly agree" and 10 (19.6%) "agree" while 43 (89.6%) urban respondents "strongly agree" and 4 (8.3%) "agree" with this statement.

Forty one (80.4%) rural respondents made up of 20 "strongly agree" and 21 "agree", versus 39 (81.3%) urban respondents made up of 27 "strongly agree" and 12 "agree" stated that they have access to the required information to make personal decisions effectively.

The responses for the statement on their level of information awareness received similar responses from both communities with 26 (51%) of the rural respondents and 25 (52.1%) of the urban respondents stating "strongly agree" and 16 (31.4%) rural and 13 (27.1%) urban respondents stating "agree". Two respondents each from both communities responded that they "disagree" with this statement with an additional urban respondent "strongly disagreeing".

The positive responses were slightly lower to the statement: information sources within the community adequately meet my needs, with 18 (35.3%) from the rural community and 15 (31.3%) urban respondents stating they "strongly agree" while another 15 (29.4%) rural and 19 (39.6%) urban respondents "agree" that the available information adequately met their needs. This was one of the statements which received comparatively more disagreements with 11 (21.6%) rural respondents and 2 (4.2%) urban respondents stating "disagree" and another one rural respondent and 3 urban respondents stating "strongly disagree".

Approximately 70% of the participants from both communities stated they were confident in using all the information sources to which they have access to in the community. Twenty eight (54.9%) of the rural respondents stated “strongly agree” while another 11 (21.6%) stated “agree” and 24 (50%) urban respondents stated “strongly agree” with another 13 (27.1%) stating “agree”. Four rural respondents and 5 urban respondents disagreed with this statement.

From the rural community 12 (23.5%) respondents “strongly agree” and 10 (19.6%) “agree” to being computer literate, while from the urban respondents 29 (60.4%) “strongly agree” and 9 (18.8%) “agree”.

A similar trend to that of computer literacy also emerged for the statement on Internet competency, with only a quarter of the rural respondents stating “strongly agree” or “agree” while almost three quarters of the urban respondents agreed to the statement. This statement received the highest number of disagreeing responses from the rural community: 16 (31.4%) stating “disagree” and 15 (29.4%) stating “strongly disagree”.

The responses for the statements about computer and Internet literacy reflect the answers that were provided for similar questions in the earlier section on computer ownership and computer use. This result also acts as a check on the validity of the responses given by the participants.

The majority of the respondents from both communities agreed to the statement on competency in library use, with 24 (47.1%) “strongly agree” and 12 (23.5%) “agree” responses from the rural community versus 26 (54.2%) “strongly agree” and 5 (10.4%) “agree” responses from the urban community. Ten respondents (4 from the rural and 6 from the urban) were “unsure” of their answer while 7 rural respondents and 7 urban respondents “disagree” with this statement.

Overall, none of the statements above received too many disagreements from respondents other than the obvious and measurable questions of computer literacy, Internet know-how, and to some extent library use. These comparisons are graphically presented in Figure 5.17.

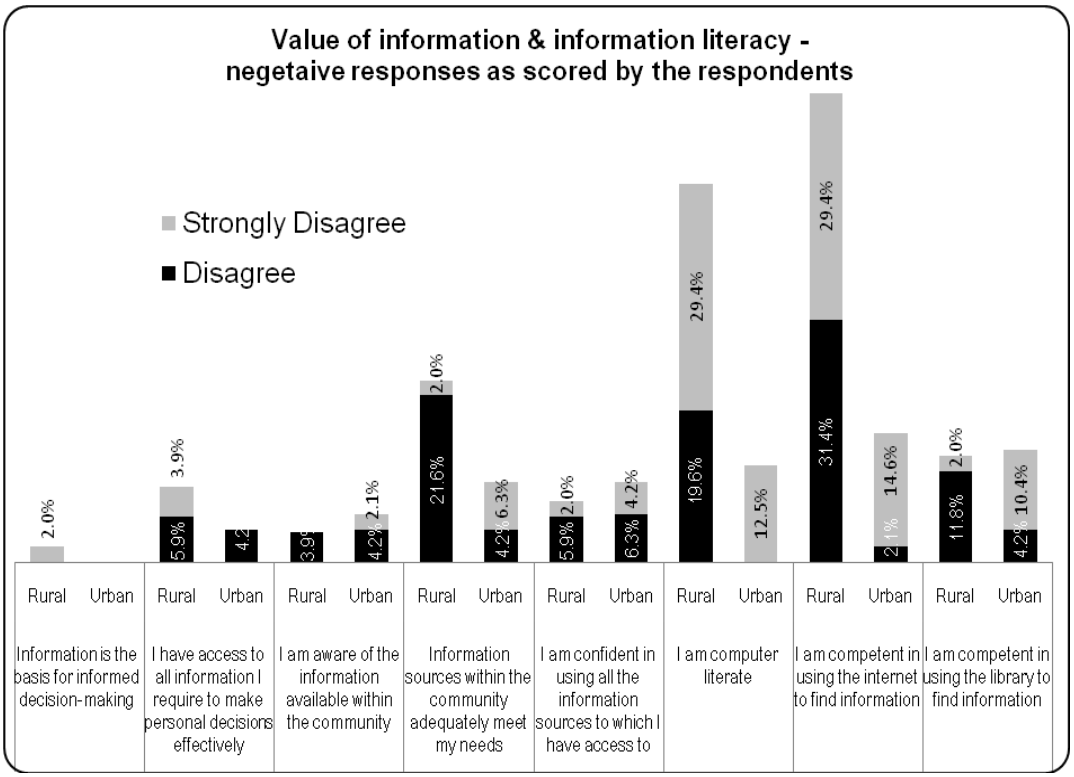


Figure 5.17: Value of information and information literacy

5.5.3 Information sharing

The last section on the questionnaire was included to obtain an insight into the *information sharing* habits of both communities. Question 59 was presented as a categorical question with "yes/no" options. The respondents were asked if there has been any incident in their life, of either a professional or personal nature, which they wanted to share with people outside their family. If they stated "yes" to this question they were lead to the next and final question (Q60) which asked them how the information was shared. The results for Q59 are presented in Table 5.39 below.

	Rural		***Urban***	
Yes	6	11.8%	10	20.8%
No	44	86.3%	36	75.0%
Missing	1	2.0%	2	4.2%
Total	**51**	**100%**	**48**	**100%**

Table 5.39: Information sharing (has there been any incident in your life you wanted to share?)

Six (11.8%) of the rural and 10 (20.8%) of the urban respondents stated "yes" to Q59 indicating there had been an incident in their life that they wanted to share with people outside their family. The follow-up question (Q60) was open-ended and in two parts, to allow these respondents to name an incident and to express how it was shared. The valid answers received for these two parts are presented in Table 5.40.

Q60(a) - Incident	Q60(b) - How was the information was shared?
Rural community	
Traditional medicine	Verbally to those who asked for it (the knowledge has been in the family for generations)
Some religious issues	Inform friends verbally
Saw a fire ball	Told friends and relatives
Saw something	Talked with *Fandithaverin* (the learned people in sorcery or black magic)
Saw jinn	Told family and relatives about it very briefly
Urban community	
3rd November incident	Radio/TV interview, printed articles in *Haveeru* (newspaper)
Religious knowledge	Over the phone or face-to face in person
(not specified)	Give people information by discussing issues
Saw a jinn	Told friends and relatives
Information on footsell	By talking with friends and people who have played football (footsell - a shorter version of football)
Research outcome	Presentation to target groups

Table 5.40: How information is shared

Of the 6 "yes" respondents to Q59 from the rural community, 3 incidents were of a supernatural nature with the sighting of some sort of unexplained phenomena; one incident was of an alternative form of medicine (this was from a person who works as a traditional healer), and one incident was about religious information (this was from an Islam teacher). The remaining response was not relevant to the question. Of the 10 "yes" responses from the urban community to Q59, only 6 respondents answered either one or both parts of Q60. These 6 responses included a research related incident with the remaining 5 of a more personal nature. Four of these 6 respondents stated they shared it verbally in person with friends. One respondent stated he shared the information with the public through a newspaper article and also as an interview on TV and the radio. One respondent, who was a postgraduate, stated that the research outcome was shared with friends and colleagues through a presentation.

It is believed that more respondents could have in fact been eligible to answer these last two questions. This was evident by the number of cross-outs of "yes" answers from Q59, most probably because the follow-up question (Q60) required more work from the respondent if it was a "yes", while if it was a "no" that was the end of the questionnaire for them.

5.6 Summary

The survey questionnaire was answered by 51 people from the selected rural island, *Thulhaadhoo* and 48 people from the urban capital, *Malé*. The gender balance was reasonable, with 43 male and 56 female participants. Overall, it was easier to recruit participants from the rural community and this gave a higher questionnaire return rate. However, the questionnaire completion rate was higher for the urban community. More questionnaires in the rural community were administered by the researcher as an interview, than was the case in the urban community.

The results of the survey show that more rural respondents were educated up to the primary level while more urban respondents had a secondary education qualification. This difference on educational level is reflected in many of the later survey outcomes, e.g. the preference for the method of questionnaire administration, their preference of the type of reading material, and the uptake of new information sources like the Internet. In both communities, especially in the rural community, there were quite a few people who had only basic literacy skills or primary level education. The results revealed that reading habits were low among this group of people. Ownership of books was similarly low for these respondents, as was the use of the computer and the Internet.

More people from the urban community stated they were employed compared to the rural community. The main employment sector in the rural community was fishing followed by tourism. It was also evident that more rural respondents were self-employed and were engaged in home-based income generating activities. In the urban community, half of the employed respondents worked in the service sector (mainly in government) followed by the commercial sector. The number of respondents who used computers and the Internet was also reflected by their employment sector. For the majority of the respondents, computer and Internet access was only at their workplace.

Access to telephone, either landline or mobile, was almost universal in both communities with only one rural and three urban respondents not having access. Use of the mobile phone was higher than the use of landline connection in both communities. In both communities the main method of communication within their own community was face-to-face. The telephone was the main communication tool for the rural community to keep in touch with the outside world, while e-mail and online chat was more common for the urban respondents, in addition to the use of the telephone. The use of letters to communicate with people within or outside their communities was almost non-existent in both communities.

Almost all of the respondents from both communities had radio and television in their household. In the rural community those who had a television also had cable TV and many of them also had a CD/DVD player. Surprisingly, the accessibility of cable TV was slightly lower for the urban community, as was the accessibility to CD/DVD players. Television appeared to be more popular compared to radio. However, it is not clear from the data whether it was the local programs or programs on cable TV that were watched most.

Half of the rural respondents and 83% of the urban respondents had access to a computer (either personal or shared) and the majority of them had used it. Considerably fewer of the respondents had access to the Internet, with this lack of access more acute in the rural community. Almost all of the respondents, in both communities, who had access, used the

Internet with most of them using it daily. In the rural community the main Internet access point was their workplace while in the urban community an equal number of respondents had access both at home and at work. Only one respondent, from the urban community, used the library to access the Internet.

The usage of Internet content was similar among Internet users from both communities, with Google™, instant messaging, and e-mail as the most popular Internet use. In the rural community, the computer was mainly used in connection with work while, in the urban community, it was used for work as well as for entertainment and leisure.

None of the respondents who answered the question on reading ability stated they could not read or write in Dhivehi language. The majority of the urban respondents, and one-third of the rural respondents, were English language literate. The other significant outcome about reading/writing capacity was in Arabic where many respondents stated they could only read and write (without comprehending the meaning), and this was more so from the rural respondents. A significant number of respondents from the urban community stated that they could speak and understand Hindi language.

These literacy levels are reflected in the types of material read by the respondents. Overall, fewer rural respondents read compared to the urban respondents. Most often, rural respondents read local magazines, local fiction books and other local books. More urban respondents read foreign magazines, English fiction books, and newspapers, both online and print. A considerable number of urban respondents, though not as many as the rural respondents, read local magazines and non-fiction books. As for the newspapers and magazines that are read, more than half of the respondents read *Aafathis* and *Haveeru* (both local newspapers), while another 21 local newspaper/magazine titles were also listed. Only five respondents, all from the urban community, listed foreign newspaper/magazine titles.

Only eight rural respondents and 19 urban respondents stated they received newspapers at their household. In the rural community, the main reason for not receiving newspapers was cited as “no newspaper outlets on the island” followed by “not available regularly”; in the urban community, “watch/listen to news on TV/Radio” was the main reason followed by “read news online”.

The use of a library as a means of information access was very low among both communities. The majority of the respondents from both communities stated that they did not have access to a library or that they did not know if there was a library or not. Only four rural and two urban respondents held library membership. From those respondents who stated they had not used a library at all, the reasons ranged from: “not having had a need”, “using Internet to find

information", and "not knowing that it could be used by adults". Forty three rural and 36 urban respondents stated that they would like to have access to a library.

When asked what information they required for day-to-day activities the majority of the respondents stated "knowledge about the world" followed by "health", "entertainment", and "child rearing". Few of the respondents stated they needed information about fishing or agriculture, or even on financial assistance. The responses from both communities were very similar for all categories listed. The other popular information sources were friends/neighbours, radio, television, and newspaper. In the urban community, the Internet was also identified by many.

The most popular information source for news was television and radio for both communities. Family/friends and neighbours played a major role in this regard in the rural community, while newspapers and the Internet were more popular in the urban community, which also had an equal level of reliance on family/friends and neighbours. Apart from doctor/health worker, television appeared to be the most relied upon information source for health issues. This was followed by radio and family/friends/neighbours in both communities. Newspapers and the Internet were more popular in the urban community for health information. In the case of information on traditional medicine the most relied upon information source by both communities was traditional healers followed by elders in the family and neighbours/friends. The information sources to find information on employment opportunities were similar for both communities with less than half of the respondents using any of the sources listed, other than newspapers in the urban community, which were used by more than 80% of the respondents. Family/friends and neighbours were the most reliant sources of information on community services in the rural community. Contrary to this, television, followed by newspapers, was the most popular source in this regard for the urban community.

The respondents were asked how familiar they were with the library, online library, bookstore, online bookstore, and the Internet as sources of information. Almost 50% of the respondents from both communities stated they were "extremely familiar" or "familiar" with the library as a source of information. The other responses were spread over "somewhat familiar", "not very familiar", "just know the name", and "don't know what it is". This pattern of response was also repeated for familiarity with the bookstore as an information source. In the case of the online library, the majority of the rural respondents stated they "don't know what that is" while one-quarter of the urban respondents stated that they were extremely familiar with it. Similarly, in the case of the online bookstore, many respondents from the rural community stated they did not know what it was while, in the urban community, there were slightly more people who were aware of it. Familiarity with the

Internet was less promising in the rural community with half of the respondents stating they did not know what the Internet was, or had only heard about it. In the urban community, a little over 60% of the respondents were “extremely familiar” or “very familiar” with the Internet

Familiarity with the Internet was also reflected in the number of rural respondents who stated they were competent in using the Internet to find information. The level of computer literacy and Internet literacy was very different in both communities with significantly more people from the urban community stating that they were competent in using the computer and the Internet.

More rural respondents stated that information sources available in the community did not meet their information needs. The majority of the respondents from both communities were confident that they were competent in using the available information sources in the community. Overall, almost all the respondents from both communities agreed that “information is the basis for informed decision-making”.

The question regarding information sharing habits did not yield very conclusive results. The respondents were asked about their information sharing habits by seeking information on whether they had faced any instances where they had come across an information situation they wanted to share with people outside their circle of friends and family. Among the few respondents who identified with this, the majority of the respondents exchanged the information with others verbally.

Overall, the survey outcomes indicate that both communities are technology savvy. However, the survey highlighted that that there are differences in the level of access to information and information sources among both the rural and urban community, with the urban community having more access. The level of use of the available information sources is similar among both communities. The urban community respondents had better language literacy, especially in terms of English language, and they also read more outside religious content. The urban respondents also read more foreign content compared with the rural community. The reliance on family, friends, and neighbours for various information needs is comparatively higher in the rural community, with the urban community showing more reliance on more “formal” information channels like the Television, the Internet, and newspapers.

These outcomes will be discussed further in Chapter 7, in the light of the review of literature presented in Chapter 2 and the Maldives situation analysis presented in Chapter 3, as well as the interview outcomes that are presented in the following chapter. The next chapter, Chapter 6, reports the interview results.

Chapter 6: Results - Interviews

The results of the in-depth interviews conducted with key information stakeholders in the Maldives is presented in this chapter, Chapter 6. The chapter is divided into three main sections: the first section contains an overview of the interviews and explains how the results are presented. The second section presents the outcomes thematically, and the last section presents a summary of these outcomes.

6.1 Overview

Relevant stakeholders from key government organisations in the information sector in the Maldives were interviewed to gain an understanding of their views and plans for the current and future with regard to information provision and access in the Maldives. The interviews also focused on policy level issues. The organisations interviewed were: the National Library (NL), the National Centre for Information Technology (NCIT), the National Centre for Linguistic and Historical Research (NCLHR), and the Ministry of Legal Reform, Information and Arts (MLRIA).

The organisations responded positively to the request for interviews. The request was sent in writing (see Appendix 9) to each organisation asking them to identify possible interviewees if they chose to participate. Two staff members each were identified by the NL and the MLRIA and one each were identified by NCLHR and NCIT[25]. All interviewees were from the management level and in some cases the most senior official of the organisations; hence, the information gathered is deemed to be authoritative.

The interviews were conducted during January 2008 in Malé, where all four organisations are located. The interviews were conducted at the respective office premises of the interviewees and in private. Four of the interview respondents–including both the interviewees from the NL, one interviewee from MLRIA and the interviewee from the NCLHR–consented for audio recording of the interviews.

A general interview guide (see Appendix 6) was used for all interviews and different themes of questioning were used for each of the organisations. These themes were presented in the information letter sent to the organisations. Based on the themes of the interview content,

[25] NCIT did not identify two personnel at the time of confirmation of interview appointment. However, when the researcher arrived for the interview, two staff members were present and the senior staff member informed the interviewer that both would be answering the questions in one sitting. However, during the interview, all the questions were answered by the senior staff member and only very few responses, mostly in the form of agreeing to these comments were received/sought from the second staff member. Hence for the purpose of the results it was considered to be a single interview with a single interviewee.

variations in questioning were undertaken with the interviewees from the different organisations. Other questions were formulated based on the interview conversation in line with the areas identified on the information letter.

The interviews were conducted mainly in the local language, Dhivehi. The four interview conversations that were recorded were later transcribed in the same language word-for-word and then translated into English language in summary form. The two interviews that were not recorded were written up as notes at the interview, in both English and Dhivehi, and later written up in English in as much detail as was possible. The summaries and notes of the interviews are included at Appendix 13.

As there were only six interviews, the researcher believed this did not necessitate the use of computer software to analyse the data. Hence the interviews were first divided into the main seven questions as in the interview guide and later coded according to the prevailing themes.

The name of the interviewees or their designation in the organisation is not included in this thesis for privacy reasons as advised on the information sheet for the interviews. However, this information, along with the audio recordings, transcriptions, and the signed consent forms will be held in a secure location within the Department of Information Studies at Curtin University for a period of seven years in accordance with the Curtin University guidelines.

6.2 Interview outcomes

The following account of the interview outcomes has been compiled based on the original transcribed version where it was recorded, and on the notes that were taken at the interview where it was not recorded. The results are presented thematically and do not necessarily follow the order in which the questions were asked. Neither are they in the same format as the interview guide. These accounts do not necessarily include all the conversations that occurred during the interview, as some comments were out of the scope of this research.

Quotations, presented as bullet points that appear within the results below, are not the exact words of the interviewees as the interviews were conducted in the local language, Dhivehi. However, the translations are as close as possible to the interviewee's words.

NL1 & NL2 are used in the following sections to indicate interviewees from the NL; MLRIA1 & MLRIA2 for interviewees from MLRIA; NCLHR1 for the interviewee from the NCLHR; and NCIT1 for the interviewee from the NCIT.

6.2.1 Information services provided by the organisations

The National Library (NL)

- The national library provides information relevant to the public… and it is mostly used as a public library, not as a national library (NL1).

According to NL1, their clientele mostly request information on current affairs and in this respect, newspapers are the most commonly used resources. She also explained that the people were very interested in keeping abreast with the outcomes of the constitutional reform activities that had been going on in the Maldives during the last few years. It appears that in the past, there was a high interest in weekly magazines but this trend had now changed to reading newspapers. The number of newspapers held has also increased in recent times. In addition to the books and periodicals, NL also provides free Internet access to its members

On further inquiry by the researcher, it was revealed that even though the services of NL are for the entire Maldivian community it was mainly used by the urban community, Malé. It was clear from the conversations with both NL participants that NL operates more as a public library and its services are limited to the physical boundaries of the capital island Malé, where the library is located.

- Even if we call it a national library, it functions more as a public library... The national collection is just a section of the library... And a public library's aim is to reach the entire community, to all age groups and providing all the resources to everyone... However, we have not been able to provide an acceptable public library service to the rural communities (NL2).

Based on these assertions the researcher sought clarification on specific library services provided to the public in the rural islands as they comprise about 70% of the Maldives' population. The interviewees stated that the services provided to the rural communities were limited to the few occasions where basic staff training was provided to privately owned library staff, if there were any, on the outer islands[26]. In addition, NL1 stated that they sometimes forwarded books received as donation to the NL, to privately owned libraries that are registered with them[27].

NL2 also added that recent amendments had been made to the library rules and regulations to take into consideration the borrowing period for library material to those living outside Malé.

[26] There appear to be a few privately owned libraries that play a similar role as to a public library in some of the rural islands. There is no detailed documentation to verify this, neither the officials from NL were able to give more information in this regard.

[27] A registry of libraries in the country is maintained by the National Library. It is not compulsory to register to operate as a library in the country. However, priority in the case of donations and other similar aid, is provided to libraries registered with the National Library.

- We lend library material to people who live on other islands for three weeks versus two weeks for the people in Malé... The other provision is that they do not have to come in person to the library themselves [for loan transactions], instead they can return [the library material] through someone else (NL2).

It was also stated that an ideal library service to the rural community has not been possible for the time being due to a lack of an appropriate library network for the country and the lack of an appropriate mobile library services[28]. NL1 stated that mobile library services were provided approximately thrice a year to the outer islands. NL2 confirmed that there have not been any mobile library services conducted in its real sense.

- Some effort has been made to take books to the rural communities but it has just been a display of books for a few hours. Lending of books has never taken place as there never were return visits (NL2).

The issue of mobile library provisions will be discussed later in this chapter.

Apart from the role of the public library the NL, true to its name, serves as the national repository for the country. The national collection housed within the NL is a small collection held in a separate room. It was revealed that the collection includes local publications that the library has collected: some through donations and some through purchase when and if they were aware of any publications. It was also stated that the lack of a national legal depository law has hindered the growth of a comprehensive national collection.

Ministry of Legal Reform, Information and Arts (MLRIA)

The NL is an institution functioning under MLRIA along with Television Maldives (TVM), Voice of Maldives (VoM), National Art Gallery, National Bureau of Classification, National Law Reform Commission, and National Centre for the Arts. As stated by MLRIA2, MLRIA's main roles are in state media, library services, cultural knowledge, preservation and promotion of national arts, and regulation of private broadcasting.

- One of the major steps [by MLRIA] in the recent years has been the privatisation of media and as a result there are three private radios operating at the moment. It helps engage the community (MLRIA2).

MLRIA1 said that an important sector under review for the time being was the area of broadcasting which at the moment consists of state media, TVM and VoM, which are the main information disseminators to all the rural islands. To reduce the state control in

[28] Mobile library services to the rural islands would need to be by boats as each island is an entity in itself separated by the ocean.

dissemination of news and information, private broadcasters had been given the go-ahead to launch their stations in 2007.

In addition to these information outlets, it was explained by the interviewees from MLRIA that the NL conducts programs to increase the reading habits of the community. MLRIA1 also stated that NL arranges mobile libraries to the rural islands in this regard. Furthermore, it was explained that the National Bureau of Classification looks after copyright concerns and issues formal approvals for publications.

The other major area of work in progress by MLRIA is on a Freedom of Information Act (MLRIA1 & MLRIA2). They stated that the draft Bill was sent to the parliament in 2006 and tabled for discussion in the latter part of 2007. It was debated during November 2007 but did not get the required number of votes in the parliament for it to be endorsed. It was explained that the Bill with the recommended revisions will be tabled for discussion in the parliament during March 2008. MLRIA1 explained that this Bill is important for the provision of information to the general public and the rural islands. She further stated that provision of information is not an issue in Malé as much as it is in the rural islands.

Improving and/or introducing relevant regulations to improve the services offered through the institutions of MLRIA had been a major part of its work and a number of positive changes had been implemented as a result.

- In recent times, the Information Ministry has taken steps to improve the services provided to the community. Under a new regulation TV/radio airtime has been changed to age specific airtimes (MLRIA2).

She said that prior to the introduction of this regulation there were no particular times for programs of adult themes or no specific times for children's programs.

In terms of equity in service provision to the rural and urban communities by the MLRIA, disparities were not as evident as in the case of NL. However, it was noted that even though television frequency can be received by all the atolls[29] it was not the case with each and every island. MLRIA1 affirmed that work was in progress to get the television frequency to all islands within the year and MLRIA2 stated that there were only about seven islands without television frequency at the time of the interview.

The interviewees were asked what MLRIA foresaw as its role in the provision of up-to-date newspapers to the rural islands. MLRIA1 asserted that they have no direct role as all newspapers in the country are owned by private parties and their distribution was the

[29] An atoll is made up of many islands (only one atoll out of the 20 Atolls in the Maldives is an island in itself)

publishers' responsibility, but agreed that since there is a huge cost involved in sending material to the outer islands promptly, for the most part this never happens. Hence the interviewees were asked if they considered this unequal provision as a concern that needs to be addressed by MLRIA.

- Distribution [of print material to the islands] is the major challenge we face (MLRIA1).
- As for the distribution, there is a huge logistic problem due to the geographic dispersion and lack of transportation. The Ministry had made some efforts to talk to boat owners in this distribution, with little success (MLRIA2).

MLRIA1 reported that a solution to these problems might be sought when post offices are established on the islands. In addition to that, MLRIA is attempting to publish a Gazette of government news. In the process of establishing a feasible model for distribution of this Gazette to the islands, MLRIA is hoping to propose a model to the private parties to take their newspapers to the rural communities as well.

National Centre for Linguistic and Historical Research (NCLHR)

The information services by MLRIA are to some extent supplemented by NCLHR. The information services areas of NCLHR as explained by NCLHR1 are language, history, and heritage[30].

- We provide information on language, history, and cultural heritage and for this we carry out research and high importance is given to ascertain the legibility of the historical information ... We have close ties with people in the rural islands. We are in contact by phone very often too. We arrange activities in the rural islands and have scheduled trips too (NCLHR1).

NCLHR1 was very adamant in her claim that their services are not limited just to the urban community. It was stated that they went to the islands to meet the Atoll Committees and schools and similar institutions and that they presented informative lectures on relevant issues. However, it was stated that they did not visit the islands as frequently as they would like and could not visit all the islands even within a span of a few years.

- This should be understandable given the number of islands we have. Moreover, we need to spend [a substantiative amount of] time in a given island for a productive outcome, which we are not able to, because of the large number of target communities (NCLHR1).

She strongly believed that it was not sufficient to provide information or get participation only from Malé, as the majority of the population is scattered among the remaining two

[30] As was explained by NCLHR1, heritage can be divided into two broad areas of tangible heritage (including buildings, artefacts, etc) and intangible heritage (including cultural traditions).

hundred or so islands. It was stated that they organised a seminar on history and heritage in 2007 inviting participants from all over the Maldives including schools, island organisations, and other interested parties. The seminar was held in Malé and was very favourably received.

NCLHR1 was asked about the dissemination of publications to the rural islands in contrast to their availability on the urban island and she agreed that there were disparities in the level of provision as there were no outlets for their publications on any of the other islands, while there was one in Malé.

- It is not equal. But we do send material to the islands. And also send items that are on sale. But I have to agree that it is not easy and is not regular. We have to take books if and when we go on a field visit or if we can find someone to take the books with them (NCLHR1).

National Centre for Information Technology (NCIT)

As evidenced by the interview outcomes above there is a need to compensate for the geographical dispersion of the country through the use of ICTs. NCIT was established in 2003 by the government of Maldives for the development, promotion and propagation of Information Technology in the Maldives (NCIT1).

As highlighted by NCIT1 the information services provided by the centre are in the facilitation of government information dissemination to the whole Maldivian community through the use of information technology. In this regard a citizen's portal has been planned to be, hopefully, launched within the first quarter of 2008.

When asked if the centre had a role in the provision of Internet accessibility to the general public especially in the rural islands, NCIT1 confirmed that it was planned to install Internet kiosks on 20 atolls; at one of the islands on each atoll. It was further stated that NCIT's aim was to increase the people's awareness of the Internet and encourage them to use it to meet their daily information needs where applicable.

As for the differentiation in services between the urban community and the rural community, NCIT1 asserted that there was and will be no difference due to the virtual nature of their service. In this regard NCIT1 said that:

- The benefit of the services [of NCIT] is equal to the wider public; but directly to the government in the provision of services online... NCIT will be the "catalyst of information facility providers" of government services (NCIT1).

6.2.2 Issues/challenges in service provision

The interviewees were asked if they believed what they did was a success and also what issues/challenges they faced in service provision.

Based on the responses from both the interviewees from NL, they believed that what they do was a success even though there were a number of challenges and shortcomings at the moment. NL1 said that the success of their work was not readily visible. Instead, she said that the achievements were in the intellectual advancement of the people.

- The credit for this partly rests with the National Library (NL1).

She explained that the academic section of the NL had been created as a direct result of the high demands on NL by tertiary students, mainly from privately owned tertiary education centres. She also reported that discussions were held with the heads of these centres and consequently library materials were purchased based on their teaching requirements and that this was an important initiative as these students were deprived of a library partly because of space restrictions and partly due to financial constraints on the part of these private education providers.

Changing the image of the library to a promising entity was cited as a major challenge that needed to be addressed. NL2 said that staff–client interaction was poor at the moment; having part-time temporary staff at the frontline of the service provision created a void in quality service delivery. She stated that there was an issue with image setting which reflected badly on the current as well as potential library users. As explained by NL2, most of the time temporary staff in the Maldives scenario are those who were just waiting for their secondary school results, upon which they will decide their next step whether to take up tertiary education or else the most appropriate jobs which generally would not be in a library as the library profession is not a favoured career option in the Maldives. Hence their commitment to the library was very meagre and their short stay in the library job was not service oriented. The discussion went onto issues of increasing the standard of frontline staff by reducing the number of part-time staff as well as increasing the eligible educational criteria in staff recruitment to possession of Advanced level qualification in General Certificate of Education instead of the current Ordinary level requirement.

Another issue that was raised was about the resources, or lack of them, and also the lack of necessary infrastructure and planning initiatives at the grass roots level. It was strongly stated that there were things that could be done with a little forethought and initiative. Again, establishing a library network in the Maldives and the establishment of an effective mobile

library were seen as critical endeavours to enhance the service provision to the rural island communities in an equitable manner.

Another major challenge was in the area of developing the national collection at NL (NL1). In the absence of a national depository law, the National Library had not been in a position to receive all national publications. One incident that NL1 shared was about some historic local magazines that were held in a private collection in *Lhaviyani Atoll*. The NL tried to get access to these publications and has not been successful in even getting photocopies of the items.

Both interviewees from MLRIA said that they believed what they did was a success. MLRIA1 said that milestones have been achieved, especially in broadcasting in terms of facilitating the introduction of private television and radio channels as well as improving the already established state media: TVM and VoM. It was also noted by MLRIA1 that the most challenging issues were in terms of provision of physical access to information and information sources, especially to the rural islands.

She stated that a major stepping stone in increasing the flow of information would be the passing of the Freedom of Information Bill that is currently under discussion.

- Until recently there has been a much closed culture of information exchange. We do not have a culture where information is passed; instead information is hoarded (MLRIA1).

To explain why she believed the work of MLRIA's was a success, MLRIA2 said that if what they did was not a success there would not be TV Bureaus (established as media centres) in other islands.

- Now there is a strong flow of information from other islands to Malé whereas earlier there was a flow of information only from Malé to the other islands (MLRIA2).

Other successes identified by MLRIA2 included the planned publication of the government Gazette. This Gazette was planned to be launched in early 2008. She also identified the launching of private broadcasting in 2007, the creation of information polices, and the establishment of Media Centres within the past few years as major successes.

The geographical layout of the Maldives and the logistics of service provision resulting from this were identified as major challenges that MLRIA faces in its role as the facilitator of information flow. Lack of professional human resources was also identified as another challenge.

- In addition to this, due to the cultural mindset of parliamentarians sometimes important Bills take longer than expected to reach a consensus (MLRIA2).

The interviewees from MLRIA said that it was a considerable challenge to reach the public in the rural islands through print media. However, they believed that the prospects look bright as services were increasingly becoming online which would reduce the physical barriers of boundary in accessing services and resources. Furthermore, as they stated, even though most of the islands have the needed technology and many people are technology savvy, the challenge lies in educating and reaching each and every island community.

In terms of the work of NCLHR, NCHLR1 said that she believed it was a success and that things were progressing, even if at a slower speed than they would like. She further stated that we have to agree that change takes time. She explained that many historical artefacts had been discovered and the necessary steps taken for their preservation. She also added that the centre had produced a number of significant historical publications.

The major challenges that were identified in their work and service provision was the geographic dispersion of the islands and as a result the difficulty and high cost of transport to these islands.

- Hence on a yearly basis we can only make about six visits. Given the 200 [inhabited] islands it is barely enough. There is a lot of work to be done in the outer islands (NCLHR1).

NCIT is still in its early years of existence and based on the four years of their service NCIT1 stated that they had taken a number of initiatives to improve the information technology scenario in the Maldives. For further details on their work, the interviewer was directed to the NCIT website which included details on major projects including Information Technology Development Project, e-government service platform, Government Network of Maldives, Information Technology Industry, Integrated Human Development Project, Information Package, and Tele-Centres (http://www.ncit.gov.mv/projects).

6.2.3 Significant projects and issues under consideration

The important and relevant initiatives and issues of the four organisations in relation to the topic under study and those that were discussed during the interviews are presented in this section. Some of these initiatives/issues relate to only one of the four organisations while others have participation or contribution from more than one organisation under review. These initiatives are grouped as:

- Development of libraries and the library profession
- Using ICTs to overcome the physical difficulties of access
- Disseminating information
- Preservation of indigenous knowledge / cultural heritage
- National archives and the preservation of historical records
- Information policies

Development of libraries and the library profession

- One of the important developments that have happened is the adoption of a legal depository law... The NL has been lobbying for a legal depository law ever since 1990 (NL2).

As explained by NL2, one of the major challenges faced by NL (in terms of the development of the national collection) was the lack of a legal deposit law. A law had been adopted in June 2006 and she explained that this is going to facilitate the development of the national collection as well as in the preparation of the national bibliography of the Maldives. However, as explained by both NL interviewees this law has not been implemented so far as there still is a need for an enabling legislation for the Bill.

After the interview at NCLHR the researcher was shown some of their historical documents in their library and throughout the building. When asked if copies of these were held in the national collection at NL, she said "we send copies if they request for it". This raises the question of the level of understanding between government organisations. Further inquiry was made if the situation was the same with formerly published material and she said that some had been sent and that more effort is needed to send publications regularly.

- The other development, apart from the adoption of the depository law, was the departmentalisation of the library functioning into major units in 2001; prior to this the library had only a library section and an administrative section (NL2).

NL1 explained that the NL was established over 60 years ago as a collection of books donated by scholars in just two cupboards, and was not open for the general public. It was initially housed in the office space of a government official who was one of the main donors. The collection was later moved to a school building and in late 1940s it was moved to a separate building[31]. In its early days the library held only Arabic books and mostly books on the Islamic religion and its rituals. Books written in Dhivehi and English languages were added to the collection only much later (NL1).

[31] The Library was founded as the "State Library" in 1945 and renamed "Majeedhee Library". It was again renamed in 1982 to "National Library"

- In those early days, only a person who was versed in a foreign language (like Arabic) can become a member of the library. Borrowing privileges as well as the use of the library were limited to members (NL1).

One major issue in terms of library provision is the absence of a fully functional public library entity.

- It is our plan to have public libraries in each of the atolls. The National Library will oversee the establishment of these (MLRIA1).

Similar to the statement above by MLRIA1, the interviewees from NL also had the same outlook regarding this issue. When asked if they had any definite plans on the establishment of regional branch libraries, NL1 stated that both the public library and national library functionalities in the current NL would be separated and branch libraries established. However, on further inquiry, NL1 said they did not have any definite plans in terms of timeframes.

NL2 agreed that discussions had been underway for the separation of these two entities and that the delays experienced in this regard were related to the space availability within the current library building. There are plans to build a ten-storey building on the present library location and once this materialises the change will occur.

With regard to the establishment of branch libraries in the rural islands, NL1 explained that at the time of the last information minister, there were plans to establish branch libraries as a library room within each of the four media centres that were located throughout the Maldives. When the new minister of information was appointed, it was planned to have media centres on all the 20 atolls and to incorporate branch libraries in all media centres. Media centres were established as planned, however, NL1 explained that the plans for branch libraries had not materialised due to funding shortages. She further stated that there were staffing issues as well. There was a slightly contradictory reply from MLRIA2 where she said that the media centre in *Kulhudhuffushi* (the capital island of Haa Dhaalu Atoll), which is also the largest Media Centre in the country, already has a library.

Based on the urban community survey respondents who stated they did not have access to a public library and those who had never used a library, the interviewees from the NL were asked what their opinion was on this matter. NL1 said that a number of things are done to increase the awareness, especially during the library week. For instance:

- During the library week last year, we distributed quite a number of books, magazines and newspapers freely to the rural community libraries; these were received very favourably by many people from the rural communities. Hence I will not say that there is a lack of awareness about our services (NL1).

It was also revealed, with further questioning, that the awareness programs and activities during the library week were targeted at children.

Based on the responses from the interviewees it was evident that the library was mainly used by students, either from the tertiary education centres or from schools.

- The main client group of the library are firstly, those who have an immense love of books and use the library just for this simple fact, and secondly, the school children who are assigned a project that needs reference from the library (NL2).

Hence, the interviewees were asked what initiatives were in place to service or encourage the adult population of the community, specifically the aged and the disabled, to use the library. NL2 said that there were plans to have sections in the upcoming new library building for aged people and other different groups of the society. It was also briefly mentioned that the realisation of these projects was not too positive because of funding issues. She did agree that running mobile libraries to the aged people in their homes in the Malé community and to people in hospitals or prisons would be a feasible project to take up.

NL2 was asked if any studies had been carried out to ascertain public awareness about the library services or how the services are being used. She answered that there was a study in mid-2007 which was basically targeted at the library clientele. NL1 said that there have not been any studies conducted to identify the level of library use, or non-use, among the community; however, statistics were collected in terms of the number of people who visited the library and the circulation that occurred on a given day.

- For instance, we don't know what percentage of people living in Malé use the library (NL1).

As mentioned earlier most of the library clientele were from Malé. According to NL1 there had been an increase in the number of library users even within the last two years. In response to a question, NL1 agreed that this increase could be positively linked to the increased information needs of the community based on the changes in the political situation that had been taking place in the last few years although very few adults use the library unless they are studying or undertaking a short term-training program.

- Women usually do not read in the library and men usually do not borrow material (NL2).

It was also stated that men usually read newspapers and women usually read fiction. NL1 said that since the separation of the children's collection (in 2005 and named Children's Multimedia Library) from NL, there had not been a shortage of seating space in NL; which at present is about fifty. NL1 also stated that the children's library was very popular, especially during the weekend. However, when asked which library was used more, NL1 said the NL was used more compared to the children's library.

The interviewees from the NL were asked why they have a policy of charging for membership and for membership application forms[32] since it was mainly used as a public library and public libraries generally operate free of charge elsewhere in the world. NL1 said that the membership fee was only a nominal value which she believed will not be a barrier to anyone becoming a member. She also mentioned that that the policy on charging for application forms had been changed recently and it was now available free of charge.

NL2 also said that the membership application form for the NL is on their website and upon further inquiry, agreed that this might not be the most efficient way to reach the public as many of the rural communities do not have access to the Internet. It was seen that an effective mobile library project will facilitate the process of application for library membership. NL2 felt that a proper public library, even in terms of a mobile[33] collection, would be very favourably received by even the adult population of the rural islands.

NL2 was asked about the level of library use by the rural community since she said changes have been made to the rules to accommodate their needs. She replied that only a handful of people from the rural islands used the library, most probably because they were not aware of the provisions. It was agreed that more needed to be done to encourage people from the rural islands to visit and make use of the library as there were quite a few islanders who visited the capital island, Malé, regularly for various purposes.

Providing mobile library services, to overcome the difficulty in establishing physical library buildings in the islands, is considered an important initiative. The interviewees from NL and MLRIA did say that there have been mobile library projects in the past. However, it was also agreed that most of these instances cannot be termed as mobile libraries in its real sense.

- The NL does not have any branches in any of the rural islands and there has not been any mobile library project from the National Library to the rural islands (NL2).

NL1 stated that they have three mobile library visits each year and that even if it attracts many users it is not very effective as the "display of books" does not get to stay in one location for long and there is no opportunity for a return visit. Moreover, the few instances where the NL participated in similar outreach programs, the focus has been on taking children's literature and the activities conducted during these visits were more children oriented. It is understood that NL1's responses were based on the services they provided which were called 'mobile libraries', while NL2's response above was more in line with the lack of a "real" mobile library initiative.

[32] Library services, other than browsing of the resource within the building, are provided to library members only. To become a member, one would have to submit a membership form and pay an annual membership fee.
[33] As mentioned earlier, in Maldives the rural islands can only be reached by sea or air.

NL2 said that discussions were under way to prepare a mobile library plan which could outline how to reach the entire Maldives community in a cost-effective way. As agreed by all, the major issues that hinders in a quick undertaking of this nature are the sea transport costs, staff shortage, and safe handling of library material in rough sea conditions. NL1 said that they had operated a mobile library to the children's park in Malé, with return visits, and that this was possible because it does not cost too much to hire a land vehicle.

When asked to what extent MLRIA could finance an effective mobile library project, MLRIA1 stated that arranging transport to reach all the islands will be beyond the financial means of the state budget for the time being. NL2 highlighted that transport will need to be separately arranged as the few regular ferry boats that operate to some of the islands will not carry heavy cartons of books. However, NL2 pointed out that with a well planned transport schedule, organisations like Maldives Department of National Registration[34] and other organisations who need to make regular trips to the islands for service provision, a combined effort could very well take the services to the rural communities at a cost-effective manner.

In terms of the development of the library profession, NL2 said that there had not been major changes. She explained that some change is to be expected as NL and the Maldives Library Association had conducted a few basic training programs for library staff. However, she said it was questionable how effective the training had been and to what extent the new knowledge is being utilised in the development of libraries by the trained personnel. One reason for this speculation given by NL2 was that there are some libraries (referring to school libraries in Malé) that still use old fashioned colour coding systems for shelf arrangement while they have been taught Dewey Decimal Classification and they have access to the Dewey manual.

NL2 thought that it was a matter of changing the image of the library from what it was before and believed people thought the library was a rundown place with old dusty resources; that work needs to be done to create a positive image of the library and increase the use of it. NL2 believed that the library use could be increased by bringing the library in level with the development of the public in the take-up of ICTs; for instance, by increasing computer terminals with Internet access.

The other major issue was that of staffing. MLRIA1 said that the NL does not have adequate personal to staff even the main library. She further said that she believes NL is conducting mobile libraries as best as could be done under the circumstances given the financial and manpower constraints.

[34] Maldives Department of National Registration has the mandate to issue National Identification cards to the public and as such they make scheduled trips to parts of the Maldives to issue these cards.

Using ICTs to overcome the physical difficulties of access

The interviewees were asked whether ICTs were being utilised to overcome the physical difficulties of service provision to the rural communities. NCIT1 said that given the advancement of ICTs, a virtual library is a possibility and online services and value-added services like DVD, games and the like is the way to go to make the libraries in Maldives useful places. Further to this, with a shared vision like the proposed establishment of post offices in the islands, combination of library services with them also can be an option to be considered (NCIT1). He further added that the future solutions are not physical infrastructure but creating a synergy in using common facilities and taking advantage of ICTs to provide services.

NL2 was asked if the library catalogue is online, and if so whether there were any arrangements for the people from the rural communities to request books from the library which then could be sent to the readers and returned the same way. NL2 said that their catalogue (which was computerised during 2007) was online [on the intranet], however, due to some problems with the functionality of the system it was not available from outside the library. She further stated that sending and receiving of items will not be a feasible option given the lack of a postal system as yet.

The interviewees from NL were asked if any digitisation programs were in place to facilitate access to the NL's collection in the national section. NL2 reported that the national section's priorities at the moment was the preservation of important national documents and books that are/and had been deteriorating due to a lack of qualified personnel and resources.

- However, discussions are underway to digitize the national collection. I am not able to say at this stage if these will be available online to be accessed by the general public (NL2).

MLRIA1 stated that there was plenty of local content on the Internet in terms of the number of local websites both in the local language as well as in English. She stated that the problem was mainly in the level of access to these online resources in terms of the necessary equipment, especially on the rural islands.

NCLHR1 reported that some of their material is online. She further stated that work on digitising their publications and holdings was ongoing, albeit at a slow speed as they lacked the necessary manpower to undertake such a project.

- We can [digitise and get them online], but we are still digitising the back volumes. And moreover, people need to come for information. Instead of us just taking the information to the people; those interested [in the information] need to put a little effort [in looking for it], to value it.

NCIT1 said that increasing ICT awareness of the public was a mandate of the organisation. To improve the use of ICTs, activities planned for the year include the provision of IT facilities, increasing awareness of situations where IT can be successfully utilised and increasing the capabilities of the public in this regard. He further stated that to provide these services NCIT participated in atoll wide programs conducted by other government institutions. Facilitation is provided by giving information to interested parties on the atolls, as is the case with the establishment of Telecentres. When asked what particular programs had been planned in this regard NCIT1 said that they don't have a prescribed program for the current year; however, once the citizen's portal[35] was established a campaign was planned to increase the awareness and use of this portal. NCIT1 was asked if the benefits of citizen's portal would be received by the rural communities since they have accessibility and affordability issues and he explained that they would be setting up free Internet kiosks, one in each atoll, to access the government portal.

All interviewees were asked about their role in the Telecentre project that was planned by the NCIT as, based on the information on the NCIT website, the NCIT was to establish telecentres at strategic locations throughout the Maldives.

Interviewees from NL and MLRIA stated that they did not know about a Telecentre project and NCIT1 said it was not their plan to set-up and manage telecentres. He explained that their role was only in facilitating the establishment of similar centres by identifying how people from the rural islands could set these up.

NCIT1 further explained that they had sent information about establishing telecentres to all the atolls in the form of a booklet, which is available on the NCIT website, and the idea had been positively received by many of the atolls. When asked if there had been any telecentres established on the islands by any groups, NCIT1 said he was aware of a successful unit on *Meemu Muli*. He further explained that there were three models of telecentre establishment adopted in the Maldives: lead taken by island committee, lead taken by an individual, and the last, lead taken by an organisation and arranged in schools after-hours with a community benefit. No further information was gained about any other islands with telecentres.

When asked why the government did not take a lead in the establishment of telecentres, NCIT1 said that it would not be feasible given the dispersed nature of the country and the small population base of the islands with the limited resources at the disposal of the government. He emphasised that the role of NCIT was only to facilitate the process of

[35] It is "an e-government project to provide government services and information to the public. Government information and services will be disseminated electronically via the e-government portal established under this project" http://www.ncit.gov.mv/downloads/TOR-PortalContentTranslator.pdf

establishment of telecentres. He further explained that the literature on telecentres shows quite strongly that governments' initiation of telecentres would work only while the government finance kept pace and once the project was handed over to the community they failed.

A similar concept to the Telecentre project was the establishment of Media Centres that was in place in the Maldives. The interviewees from MLRIA stated that they already had established media centres in all atolls in line with the policy on regionalising the broadcast media (in 2005) and that their aim was to use these media centres in service provision to the rural communities. This would include a library collection.

Disseminating information

Until mid-2007, there were no television or radio channels other than TVM and VoM operated by the state through the MLRIA. Private broadcasters had been given permission to operate during late 2007 and as a result three new privately owned radio channels had been registered.

MLRIA2 was asked how popular the media channels were as a means of disseminating information to the wider community; to which she replied that there had not been any studies to identify what percentage of people watched TVM or listened to VoM. She further stated that it was strongly believed that a few years back, state TV and radio did lose to foreign channels like Star Plus, Sony and other foreign English channels. However, she explained that there has been an uptake in the demand for local television and radio with the recent introduction of added local content like daily local drama serials and the daily telecast of parliament sessions on TVM. She also stated that it was believed that in the rural islands, radio predominated as it could be listened to while doing other work.

Publishing and access to print material was another issue that was highlighted in the interviews. MLRIA2 was asked if the rural communities had access to print material like newspapers and other similar publications in the same way as the people in the urban capital. She answered that while they had no role in the publication of private material, MLRIA did encourage the production of newspapers by compensating the publications with a financial contribution. She stated that this practice started around 2005 and that there had been an increase in the number of newspapers in the country since then. However, it was also explained that due to the high cost and lack of a feasible avenue for sending newspapers regularly to the outer islands, most of the rural community did not have access to current editions of the newspapers.

The interviewees from MLRIA also explained that to compensate for the lack of up-to-date newspapers that reached the rural communities, the earlier mentioned official Gazette was planned to facilitate free flow of information. The planned dissemination of the Gazette to the rural islands would open up routes that could be utilised by the private newspaper publishers for delivery in a timely fashion, at least within a few days.

MLRIA2 was asked what the MLRIA's role was in promoting private publishing. MLRIA2 said they did not proactively deal with publishing. She explained that writing was generated and encouraged through the departments under the MLRIA.

- For instance, the NL recently held story writing competitions for all ages (MLRIA2).

The National Bureau of Classification within MLRIA is responsible for approving material for publications and assigns ISBNs for the approved publications.

NCLHR1 was asked if any formal procedures were in place to limit publication of historical matter by private parties. It was clarified that NCLHR does not necessarily have to endorse any historical publication. However, they provided guidance and assistance in similar endeavours through expert advice and/or with open access to their historical document collection in their library.

As for the research findings emanating from NCLHR on their linguistic and historical studies, NCLHR1 explained that they were disseminated through their publications which were available for sale in the centre's bookshop located in Malé. She further stated that there was an adequate demand for their publications; however, at present there is a trend towards demanding more politically-oriented publications.

When asked if any of the publications were distributed freely or if they were available online, NCLHR1 said that there are a few publications online; mostly because of a lack of necessary infrastructure to digitise their material. She was asked if the price of the publications would be an issue in accessing this material to which she responded:

- Language is a greater issue than the price (NCLHR1).

She said that the younger generation sought publications in the English language and that most of the NCHLR publications were produced in Dhivehi language as promoting the local language was one of their mandated tasks. She said that there was a greater need to translate the local publication into English to increase their usage.

Preservation of indigenous knowledge / cultural heritage

According to MLRIA1, the preservation of indigenous knowledge is not directly overseen by MLRIA; NL deals with it. MLRIA2 explained that work is underway to promote the performing culture and reviving and teaching of this was done by the National Centre of Arts under the MLRIA. She further stated that the Maldives has had a strong oral culture of information exchange and that documentation of this knowledge was rare.

NL2 said that there were identified elderly people, especially in the southern islands, who had important indigenous information and who were ready to sit for an audio recording. However, NL2 explained that not much work has been done in this regard. When asked if this work was a mandate of the National Library, NL2 said that it was not; that NL had an interest in this work for the sake of preserving this evasive knowledge and also with a view to increasing Maldivian publications.

- If we do not act soon, we will lose valuable non-transferable information held with the elderly people. This is an area that needs a partnership approach with NCLHR (NL2).

NL1 said that NL's role in the preservation of the indigenous knowledge would only come into play when there was a written record. In this regard, she further stated that the national collection holds books on the art of *Dhoni* (the local vessel) building, on Maldivian crafts, indigenous medicine, and Maldivian culture. It was also stated that NL has taken the initiative and produced a few books with the help of local writers.

- This knowledge is difficult to capture as it is not written (NL1).

She also reported that the NL had worked on obtaining any written accounts in the possession of individuals from the whole country. However, support for this had not been too positive. She said that it was difficult to get hold of important historical documentation held by private individuals due to the geographical dispersion of the islands.

The interviewee from the NCLHR said that the oldest Dhivehi records held were copperplate grants from the late 12th century known as *loamaafaanu*[36].

- The oldest writing is a *Filaa*[37] known as *Salaahudheen Filaa* which was written during the 14th Century. The earliest writing is on a stone received from *Landhu* (an island). It is believed this was written in the 6th Century. These weren't written in Dhivehi, but in Eveylaa and Dhives akuru[38].

[36] During that time, official decrees were written down on copper plates which are stringed together. These are known as *loamaafaanu*.
[37] *Filaa* literally means a piece of plywood.
[38] *Eveylaa* and later *Dhives akuru* were the earlier variations of the local writing system which now is called *Thaana*.

These early scriptures are readable only by a very few Maldivians hence NCLHR1 was asked if these early writings had been translated in any manner. She said that two *loamaafanus* had been translated and published and that *Gamu Loamaafaanu* had not been published yet, but was available on the Internet. She also stated that to increase the appreciation of these early writings, NCLHR recently conducted a training course in teaching *Dhives akuru* which was very favourably received by many interested individuals.

NCLHR1 was asked what role they have in the preservation of indigenous knowledge. She replied that they had not been able to do much in that area. Nonetheless, it was emphasised that it is an important aspect because the indigenous knowledge was part of the intangible heritage of the nation. Apart from indigenous knowledge on areas like traditional *Dhivehi beys* (local medicine), she said that it was important to preserve oral traditions, history, and stories that has been passed orally from generation to generation since time immemorial.

National archives and the preservation of historical records

Preservation of historical documents was an issue in the Maldives given the absence of a national archive.

- Digitisation of archives is thought about; however, at the moment there is no archive… but hopefully there will be a section or an institution to handle the archive issues (MLRIA2).

MLRIA1 informed that it was in MLRIA's mandate to establish a National Archives. She explained that a concept paper had been written and a project was prepared in 2005. However, work on this endeavour has not progressed as swiftly as expected. The researcher had some knowledge that records were kept in the creating agency for a certain period of time as prescribed by the President's Office. MLRIA1 was asked if MLRIA had any role in looking after these documents and it appeared that she had no idea how long the documents were kept, neither had she any idea as to what happens to the records after the prescribed duration. She agreed that this would be something that will be mandated for the National Archive when it was created.

- We simply don't have a National Archive at the moment (MLRIA1)

NL1 said that there was no national archive as such (a few years back the National Library building displayed a name board for the National Archives). She explained that whoever created the records kept and maintained them and that there were discussions to create a National Archive, to bring all records together. According to her, there is resistance on the record creators' part to part with the records in their possession.

NL1 was asked what the situation was with their national historical archival records and she said that there were a number of important documents and books that were in need of urgent preservation. These, she explained, could not be handled due to a lack of qualified archival personnel as well as the lack of basic laboratory facilities for such an endeavour. She also said that they had tried to negotiate some arrangement in preserving the material or training the necessary staff through neighbouring countries like Sri Lanka and Malaysia. However, she explained that so far there has not been any meaningful solution to the problem.

NCLHR was asked if there was any form of cooperation between NCLHR and NL in the preservation of national historical documents as there appeared to be a dual role for both organisations in this regard. NCLHR1 replied that there was no formal cooperation or planned arrangement in this regard and that if there was a need for assistance from NL they sought help and it was reciprocated in kind. She specified that there needed to be a stronger synergy between NL and NCLHR in this regard. In terms of identifying who was responsible for the preservation of historical research, NCLHR said that they looked after their records and NL looked after theirs.

- Whatever we have in our centre, we look after it to our best ability. We need a conservative laboratory and I believe it will come under the Museum which will soon be built (NCLHR1).

Information policies

The other important area under development was that of information policies. The interviewees from MLRIA explained that at the moment there were six Bills that have been sent to the parliament. The Freedom of Information Bill was recently discussed in the parliament in Nov 2007 and failed for the want of one vote. Other than that the MLRIA had compiled a number of regulations to facilitate in the airing of TV/Radio programs.

- For instance there are regulations which guide how to depict women, children, and religion in the broadcasting of radio and TV programs (NL1).

On the question of the status of a copyright legislation in the Maldives, one of the interviewees said that a copyright law was essential especially for the performing arts sector. However, it was also questionable as to the extent to which such a law could be implemented as there is a "culture of copying" (MLRIA2). She further explained that a copyright law did not exist in the Maldives as yet, and that a draft was under its final discussion at the moment. She explained that this work was being carried out by the National Bureau of Classifications within the MLRIA.

Another important policy was the national IT policy. NCIT1 said that their IT policy ensured strengthening of information provision to the Maldives through ICTs. The main strategy

proposed was the adoption of online services as much as possible with structured programs. In this respect, NCIT1 stated that telemedicine was under trial.

- The main difficulty in equal service provision to the whole country is its geographic dispersion. Hence the aim is to go for a "technologically one land". And it can be done (NCIT1).

6.2.4 Views on the Maldives Information Culture

The interviewees were specifically asked what their views were on the existing information culture in the Maldives. According to NL2, Maldivians lack a culture of reading books. She believed that people were more attracted to the Internet. NL2 also conceded that there were very few Maldivian publications:

- The few that are published are mainly children's and adult fiction. Even books about Maldives are mostly written by foreigners (NL2).

NL1 said that the scholarly output of Maldivians was showing positive signs. She further stated that it had increased and was increasing, and that in view of this change, the NL had changed the target of their academic section from "A-Level" (higher secondary education) studies to graduate level.

MLRIA1 said that there was a huge gap in the information culture of the Maldives. She believed that people were not accustomed to reading and there was no culture of information seeking and that, in general, people were not up-to-date with current affairs resulting in a lack of general awareness on issues. She said that the MLRIA had been trying to instil an information culture in the people and that it would happen in time. When asked if there was a difference in the information culture of people from Malé and people from the other islands she said that she was not in a position to answer as she has not travelled to the outer islands enough to have knowledge about their situation.

MLRIA2 responded that people did not necessarily like to share information. She, like NCIT1, said that people did not like to read; instead "people like to talk".

- In short, the Maldives has a "closed culture on the dissemination of information" (MLRIA2).

MLRIA2 remarked that there was a changing trend brought about by education as well as outside influences since the Maldives was now very much in contact and open to other countries.

The interviewees from MLRIA were asked about the situation of blocking of content on the Internet and MLRIA1 said that she was not aware of any such activities by MLRIA. MLRIA2 said she was not in a position to comment as it had nothing to do with the Ministry.

According to NCLHR1, there were people who had an interest in historical records of the country; the numbers were not high, but as a percentage of the population, the numbers were satisfactory. However, it was believed that more needed to be done to foster interest.

- We don't have enough academics in this area. However, given the late start of our formal education system in 1960s we are in a positive frame. And also due to the geographic spread of the country, the scholars are distributed and combined work is hindered (NCLHR1).

In general, however, she said that interest in historical research or local information was low. She also added that there is hardly anyone who watched local TV.

- People favour Indian drama serials and the younger generation is fixated with Hollywood movies and American TV. Awareness needs to be created in the importance of local media. Progress is not just following foreign media... Interest in library also needs to be fostered and more avenues to access information is needed (NCLHR1).

NCLHR1 was told that the preliminary finding of the rural survey showed that they were satisfied with the level of information access they have and NCLRH1 responded that people did not even realise that they did not have access to enough information. She also added that, even if people said they want to read but did not because of a lack of reading material, the fact of the matter was that people did not proactively look for it.

NCIT1 was told that the tentative survey results showed that older adults did not use the Internet as much as the younger generation. He said that it was a case of a need; the adults did not see a need for it. He said that many households had computers but these were accessed by the children. He said that it was a positive side of our culture that everything that was possible and within the means of the parents was done for the advancement of their children. He further added that NCIT had a role in advocating the productive use of the Internet. NCIT1 also added that the uptake of the Internet by the adult population would increase in the near future with the introduction of Internet banking in the Maldives. He said that once people realised the ease of Internet banking and once they saw others successfully using it, more people would take it up and this would consequently increase their confidence in the benefits of the Internet.

In respect to NCIT1's views on the existing information culture he stated that:

- There is no proactive approach to information seeking. And most information seeking is done verbally [print sources are seen not that important]. The culture will change if there is a need for it (NCIT1).

He further added that Maldivians were quick in the up-take of any technology. As an example he cited the almost universal use of the mobile phone throughout the Maldives without any distinction between the urban and the rural islands.

6.2.5 Production and dissemination of activity reports

All the interviewees were asked if they produced reports of their work and how these reports were disseminated. This question was posed in order to find out if additional authoritative documented records could be found to support these narratives and to understand how they disseminate information.

Both interviewees from the NL said that the library did not prepare activity reports other than the annual report that is sent to the President's Office as part of the operating process. However, NL2 stated that the NL website had information and news on ongoing activities in the library. When questioned further, she agreed that this was not the most effective means of reaching the large proportion of both urban and rural communities due to the limited accessibility to the Internet by these people. NL1 also said such reports or documentations were not published regularly; however, leaflets about library services are produced. NL1 also maintained that a book outlining the history of the NL had been published recently and were available for purchase.

MLRIA1 said that they had recently started publishing regular yearly highlights, apart from the annual report that is sent to President's Office. They started publishing these as short handbooks and pamphlets and she said that these were distributed with the promotional material in an information pack that is given to visitors. Upon further inquiry, she said that these publications were not sent to the islands but were available on the website which she agreed was something that needed to be reconsidered given the situation of use and access to the Internet on the rural islands.

NCLHR1 also said that they did not prepare reports other than the annual report that was sent to the President's Office. However, further questioning revealed that they kept a daily log of things that happen in the Maldives. This was prepared based on the information they received from the organisations concerned, from the news, and/or from the public. She was asked if this was not a duplication of effort given the work of the daily newspapers and she said that this was much more specialised and quite often include news that were not picked up by news services. As an example she cited an activity by an island community that would not be "news" worthy but years later might tell an important story about that island community. NCLHR1 said that these were specialised records that were kept only for the purpose of the centre's research. They were not formally published but that bound volumes were shelved at the centre and could be used at the centre by anyone interested. She also explained that digital versions of recent issues were held on CD format.

- This is called "*Kankan Hingaa*" [a rough translation would be "things that are happening"] where we record daily highlights. (NCLHR1).

She said that this record had been taken every month since 1943 hence made a valuable information resource for historical research. She was asked if the national collection at the NL had copies of this and she answered that:

- They haven't asked for it, we will send it when they request for it (NCLHR1).

NCIT1 also said that they did not prepare any reports other than those which were required for the President's Office. Nevertheless, he said that all information and news regarding their projects and updates were available on their website. He also agreed that given the limited access to the Internet, printing and distribution of updates is something that they needed to consider.

6.3 Summary

All six interviews–two interviewees each from both the NL and MLRIA, one interviewee each from the NCLHR and the NCIT–were conducted during January 2008.

The interview outcomes reveal that:

- The Maldives has a highly oral information culture where reliance is placed on verbal information exchange rather than on written texts.
- There is a vast difference between the information services provision to the urban capital, Malé, and the rural islands of the Maldives.
- The rural islands, in general, did not have access to reading material including daily newspapers and books as the geographical dispersion of the country hinders the physical provision of services to many of the islands.
- Paper based information exchange was further limited due to a lack of postal services.
- The use of ICTs in overcoming this physical boundary was seen as a possibility theoretically, but practically it was not that feasible given the numerous physically separate island units and the lack of financial resources.
- The NL is the organisation responsible for the provision of library services to the urban as well as the rural islands:
    - Lack of public libraries accessible to 70% of the country's population living in rural islands was a major concern and it was felt that mobile libraries would be the ideal

solution. However, the possibility of mobile libraries to reach these islands was not too positive for the foreseeable future in terms of its infrastructure costs.

  - A lack of a national legal depository law hindered the development of the national collection within the NL.

- MLRIA deals with policy level issues like the proposed Freedom of Information Bill, copyright legislation, legal depository law and freedom of media in the country.

  - The failure of the passing of the Freedom of Information Bill by the parliament can be associated with the inbred culture of withholding information.

  - The introduction of legislations to permit private broadcasters to operate in the country in late-2007 could be seen as a positive step in opening up information exchange.

- The NCLHR facilitated research and development in linguistic and Maldives history and cultural heritage. Due to the very nature of their work they had close ties with the rural communities in terms of historical findings.

- The NCIT was the enabling body which provided the ICT backbone for the government to overcome the difficulties in physical service provision due to the country's dispersed geographic nature.

- In all the four organisations interviewed, a general sense of understanding was present regarding the disparities in service provision for the urban and rural communities.

- All organisations document their annual activities in the form of an official written report sent to the President's Office. However, promotion of their activities for the public is meagre and sometimes irrelevant to the rural communities as many of these were only on the organisations' website which for the most part was not accessed by the rural community.

Chapter 7: Discussion

This chapter contains a discussion of the results presented in Chapters 5 and 6 in light of the literature review undertaken in Chapter 2. It addresses the research objectives 1 to 5 of this study to:

- define and evaluate the present information culture of the Maldives,
- investigate the relevant information initiatives in place,
- investigate the relevant information initiatives planned,
- identify the information needs of the people of the Maldives, and
- identify the challenges associated with the implementation of information services.

As the research unfolded, it became evident that the first objective was the significant one. The remaining objectives were the methodologies employed to answer the questions posed by the first objective and this is how the discussion which follows will be reported.

A discussion of the issues in the research design and limitations of this study will conclude this chapter.

7.1 Defining and evaluating the present information culture of the Maldives

To achieve the objectives of the study, an analysis of the Maldivian culture, its people and their information use was carried out based on available documentation. To add meaning to these findings, a survey of two communities was conducted and additional interviews were held with selected information stakeholders of the country. As explained in the literature review in Chapter 2 and illustrated in Figure 2.1, any discussion on societal information culture will need to address its contributing elements. These include:

- indigenous knowledge,
- ICTs,
- information literacy,
- research and publication,
- library and information services,
- mass media, and
- information policies.

This discussion will follow the same structure, with discussions on each of these elements one to seven above, addressing objectives one to five.

7.1.1 Indigenous knowledge

The first element of an information culture that was proposed was indigenous knowledge. The Maldivian literature and the discussions with the information stakeholders reveal that, in the Maldivian context, the term indigenous knowledge is not often used. Instead, the term traditional knowledge prevails in the same framework. As demonstrated by Evans (1992) and Raseroka (2003a), and like other developing countries, traditional knowledge continues to reside in the minds of the holders of this information. This appears to be true in the Maldivian context. For example, one of the survey respondents, a practicing traditional healer stated, that her remedies are not documented.

As it happened, only the area of traditional medicine was specifically included in the survey questionnaire as it is one of the prominent areas of traditional knowledge in the Maldives. As seen in Table 5.34, there is a predominant reliance on traditional healers, neighbours & friends, and the elderly in the family for information on traditional medicine.

Iqbal (2004) reported extensive use of oral tradition in his study to identify the information needs of rural and urban slum dwellers in Bangladesh. Likewise, in the Maldives, reliance on "people" as an information source is prevalent in all areas of information requirements sought in questions 49-57. For instance, the data in Table 5.30, on information required for their day-to-day activities, reveals that while fishing is one of the main economic activities in the Maldives, especially on the rural island, only a few people stated that they needed information on fishing or even agriculture. This highlights the reliance on the verbal knowledge passed down from generations with many of the respondents stating that their information needs are to a greater extent met by their own experience. This is similar to the concept of the link between the culture one belongs to and the mastery of life as described by Savolainen (1995).

Furthermore, the oral tradition of Maldivians identified by Gray (1887) is still prevalent after over a century. This view is supported by the interviewed officials and can be verified by the survey results in Table 5.12 which reveal that people communicate verbally with others within the physical boundary of their island as well as with the outside world. Additionally, as demonstrated in the document analysis as well as the survey outcomes, it can be concluded that written communication, personal or scholarly, other than for official purposes, is non-existent.

The existing initiatives to address the issue of preserving similar oral traditional knowledge, in areas like traditional medicine, traditional art forms, and oral cultures, are abstract. According to the NL officials, there exists only one comprehensive book on traditional medicine and that the NL has attempted documenting other areas of traditional knowledge,

like that of local vessel building which had resulted in a limited number of books being published by them. Similarly, NCLHR advised that they are continuously working in this area.

In terms of planned initiatives in this context, the NL and NCLHR both stated that they have identified a number of elderly people who have valuable historical and cultural information and who can contribute to the traditional knowledge base of the country. The NL and NCLHR believe it is an important area that needs to be addressed and that work needs to be done in capturing that information before it is lost. However, based on the conversations with these two organisations, there does not appear to be any concrete plan or synergy between these two organisations in this endeavour.

According to the officials, the main challenge in preserving traditional knowledge in the Maldives is in the dispersed nature of the country and in getting access to the elderly people who posses this information. Based on the information that was received from the officials, it is not clear how they are proposing to address this issue. Furthermore, there is some duplication of work among NL and NCLHR and it is not clear who has the actual mandate to carry out this work. What appears to be the case is that NCLHR is responsible for the creation and NL is responsible for the preservation and dissemination of traditional knowledge.

7.1.2 Information and Communication Technologies

The second element in understanding the prevailing information culture in a country is its use of ICTs including: telecommunications technologies like telephony, and digital technologies like computers and information networks.

As seen in the situation analysis, in Chapter 3 on the background to the research, telecommunication trends in the Maldives appear to be much more favourable than other comparable developing countries with an almost 80% penetration of telecommunications services (TAM, 2006). This is further evidenced with 100% coverage in mobile phone service provision to the country, with mobile phone subscribers exceeding the total population (TAM, 2007). This is supported by the survey results shown in Table 5.11 that almost all the survey respondents have access to a personal mobile phone, or at least access to a land-line, with one-fifth of the rural respondents and almost half of the urban respondents accessing the Internet using their mobile phones. This is made up of mainly people under the age of 35.

The utilisation of digital technologies is evident in some information initiatives, like the digitisation of selected material at NL, the digitisation of some research publications at

NCLHR, and the interviewed organisations having content about their services and news, available from their websites. Over half of the rural respondents, and almost all the urban respondents have access to a computer with 60% of the urban respondents having computer access at home (Table 5.14). With regard to the use of computers, there were quite a few people who said they did not use one even if they have access to it and their reasons were mainly lack of know-how.

The Internet was introduced in the Maldives in 1996 and at that time, given the high cost of telecommunications as well as accessibility to computers, access was confined to the elite (Ahmed, 2004). Today, the service is literally available nation-wide on a dial-up, as well as broadband fast access to some islands. The survey results in Table 5.16 reveal that 20% of the rural and 71% of the urban respondents have access to the Internet with only a few of them not using it. The reason for this non-use is not clear as no question was asked in this regard.

Access to computers or the Internet outside home or workplace, in a community facility (as seen in Table 5.14 and Table 5.16), is rare in both communities. Correspondingly, as reported earlier, the researcher had considerable difficulty in accessing the Internet in the surveyed rural island as there was no community facility like a Cyber Café. Wireless connectivity is available in some outer spots of the island. This service can be accessed at a cost, and it is necessary to have a portable computer with a network card and have the patience on the part of the user to move around to find a "good" spot to receive the signal. Conversely, in the urban community there are quite a few public places like Cyber Cafés, wireless zones, and the NL where the Internet could be accessed.

As established from the situation analysis in Chapter 3, and verified from the interviews, an important ICT initiative being undertaken by NCIT is the ongoing digital networking of government services and the planned creation of a citizen's portal to interact with these services. The idea is to overcome the difficulties of the geographic dispersion of the islands, which hinders service provision to the remote islands. The NCIT further clarified that access terminals to these online portals will be established in each of the 20 atolls, but not on each of the islands. As stated before, there are 196 inhabited islands among the 20 atolls.

The establishment of telecentres is also being tested in Maldives with coordination from NCIT. Telecentres are believed to be an important initiative to address the disparities in information access in rural areas (Hudson, 2000). The interviewee from NCIT said there was a successful telecentre project on one of the islands. However, there does not appear to be documentation on the success or effectiveness of this initiative as yet. The discussion with

the NCIT official also revealed that the NCIT promotes the idea and facilitates its establishment, but does not take an active role as was previously assumed by the researcher.

In terms of the information needs of the people in the ICT context, the survey results show that the Internet is less popular in the rural community and that in both communities older people do not use the Internet as much as the young. As explained by the official from NCIT, this reflects the needs of the people. This can also be linked to the know-how or awareness of the facilities or simply to access issues as discussed above.

As evidenced by the survey outcomes, the Internet is also increasingly seen as a substitute for books and as an information source. Likewise, the situation analysis in Chapter 3 demonstrates that blogging has become very prominent with the Maldivian community with hundreds of blog entries written by Maldivians and syndicated by the mvblogs.org everyday. However, according to the survey participants (as seen in Table 5.17) the use of blogs, in both communities, as an information source is very low. This could be a shortcoming in how the question was posed or it could be attributed to the small sample base. There may also be other variables.

It can be deduced from the findings of the survey and the interviews that the main issues/challenges in using ICTs, specifically the Internet, in the Maldives is affordability, accessibly and awareness, especially in the rural community. The information officials stressed the importance of using ICTs in information provision to the outer islands to overcome physical barriers. Nonetheless, as explained by the interviewed officials, it is not that feasible given the numerous physically separated island units and the lack of financial resources. This is the paradox of the digital divide debate. As explained by Credé, & Mansell (1998), the use of ICTs in overcoming developmental issues is seen as a possibility theoretically, but practically, due to the high cost of the necessary ICTs infrastructure, developing countries have access issues. Another issue in accessing the available ICTs facilities by the community is the lack of know-how or ICT literacy. As evidenced by the interviews, not much emphasis was being placed by any of the interviewees on issues of information/ICT literacy.

7.1.3 Information literacy

The third element in the information culture discussion is information literacy. As reported in the literature review, information literacy in the present context includes ICT competency (Markauskaite, 2005), in addition to the skills in locating, evaluating, and selecting appropriate information sources (John, 2005). In order to contextualise the existing information literacy of the Maldivian community, a combination of variables, including the

language literacy, coupled with reading habits, and familiarity and usage of information sources are utilised in the following discussion.

According to the survey results, the literacy level of both surveyed communities, in the local language, Dhivehi, is high at 98%, and is consistent with the MPND (2005) statistics. However, English language literacy is not widespread contrary to Mohamed's (2006a) claim, and the general belief that the majority of the Maldivians possess this skill. The survey results in Table 5.20 show that English language skills are "poor" or lacking mainly in the rural community and amongst a high proportion of the older adults. Many of these respondents identified themselves as having "basic literacy" in response to Q3 on their educational level.

From the 11 (eight rural and three urban) respondents who stated "not at all" for English language skills (for Q34), eight participants (five rural and three urban) had earlier identified themselves with "primary education" (in Q3). The data is included in Table 7.1 below.

English language proficiency	Educational Level	Age	Type
Rural community			
Not at all	Basic literacy	36-45	Interview style
Not at all	Primary	56+	Interview style
Not at all	Basic literacy	56+	Interview style
Not at all	Primary	36-45	Self-administered
Not at all	Primary	36-45	Interview style
Not at all	Primary	46-55	Interview style
Not at all	University (undergraduate)	36-45	Self-administered
Not at all	Primary	31-35	Self-administered
Urban community			
Not at all	Primary	56+	Interview style
Not at all	Primary	56+	Interview style
Not at all	Primary	56+	Interview style

Table 7.1: English language proficiency, educational level and age

For those surveys that were read out to the respondents (interview style) it was discovered that many of the older rural respondents had attended formal schooling that was available in their time, which was three years of schooling in basic arithmetic, reading and writing in Dhivehi and reading of the Quran. Hence, in answer to the question on their educational level (Q3) they were not happy to categorise themselves as having "basic literacy", instead they equated their education level to "primary education", which is very different at present. As was reported in the situation analysis, the present English language based education system was initiated only 47 years ago in Malé and much later in other islands (Education Master plan, 1996, cited in Mohamed, 2006a).

The other significant languages in the Maldivian context appear to be Arabic and Hindi. Arabic is central because the Maldives has been a 100% Muslim country for over eight centuries and many religious books appear in Arabic. Hindi has significance because of the ongoing popularity of Hindi movies in the Maldives and also, as stated by Hockly (1935) it

has historically been an important language in terms of trade. As can be seen from the survey (Table 5.20), Arabic and Hindi have an interesting contribution to the literacy of Maldivians with many of the respondents understanding Hindi without the necessary reading or writing skills and many others having the ability to read Arabic without comprehending its meaning[39]. This is consistent with Maloney's (1980) observation of the practice of Arabic teaching in the country, which is focussed mainly on the reading of the Arabic text.

Based on the observations above, it can be concluded that the literacy level alluded to in the Maldives official documentation is that of the ability to read and write in the local language. The second main language (as in Table 5.20) that is comprehensible to 33% of the rural and 69% of the urban community is English. This calculation has been derived from combination of the "proficient" and "average" responses to Q34. What this result reveals is, for the majority of the Maldivians, the only comprehensible language is the local language, Dhivehi and this highlights the importance of creation of local reading material. Raseroka (2001) advocates the importance of provision of content understandable and relevant to the people in order to create an information society; especially for countries whose local language is not English.

The interviewed government officials were consistent in their responses that Maldives does not have a reading culture and has an oral tradition of information exchange. This is contrary to Maniku's (1995) claim that the high literacy indicates a reading culture. The reading culture according to the survey outcomes shown in Table 5.21 is of a very casual nature and is very much based on the available local material. Furthermore, there appears to be some distinction between the rural and urban communities in terms of what they read and the information sources they utilise. As seen in Figure 5.6, Table 5.25 and Table 5.26, more urban community participants compared to the rural, read and own books on general information and specialised subjects. However, the main finding is that the literature that is read is usually light information, as in newspapers, magazines and to a lesser extent fiction.

The survey results also reveal that there is a close relationship between the educational level of the person and what is read and between the gender and what is read, as presented in Table 5.22 and Figure 5.8. This trend is similar in both communities. More respondents with secondary education and higher, read English language material while those with primary or basic literacy read local newspapers and magazines. More male respondents read foreign magazines while more female respondents read local magazines and fiction. This was also supported by NL1 who indicated among those who use the NL, men usually read newspapers

[39] This observation is relevant with the country being a 100% Muslim country and that people identify themselves with the Quran in its Arabic form.

(in the library) and women usually borrow fiction books (to read at home). The gender differences in reading habits also can be deduced as signifying a lack of access as well as social restrictions. The female population, especially in the rural communities, work within their homes and, it would be difficult for them to access reading material circulating in the community.

When the survey respondents were asked to list any newspapers/magazines that they knew, both communities listed quite a variety of newspaper/magazine titles (Table 5.23). What was significant was that the rural respondents listed only one English newspaper/magazine; this was a local magazine, *Monday Times*, which was in publication only during 2000 to 2002[40]. The urban community listed 7 English foreign newspapers/magazines. The combined listing from both communities brought forth 21 local language titles and nine English language titles, which was an impressive number given the small community. A closer look at the listed titles shows that many of the titles are no longer in publication.

As evidenced by the above survey results and also as stated by Wedgeworth (2004), general literacy skills have some relevance on what is read or whether they read. In the Maldives, illiteracy is almost non-existent; however, as stated by Razee (2007) functional literacy needed to make meaningful use of the available information sources is not that widespread, especially among a large proportion of the older adults, and markedly among the rural community, as they had not had formal schooling. This was presented in Figure 5.2, and as demonstrated in Table 7.2 below there is a link between literacy level and information literacy skills, with those with higher education skills tending to identify competency with the specified information resources.

Rural community								
Educational level (Q3)	Those who "Strongly agree" or "Agree" (Q58)						Total respondents in the group	
	Computer literate		competent in using the internet		competent in using the library			
Basic literacy	1	25%	1	25%	1	25%	4	8%
Primary	4	17%	2	8%	16	67%	24	47%
Secondary	7	54%	3	23%	9	69%	13	25%
Higher secondary	7	100%	5	71%	7	100%	7	14%
Diploma/Advanced diploma	1	50%	1	50%	1	50%	2	4%
University (undergrad & post grad)	1	100%	1	100%	1	100%	1	2%
Total	**21**	41%	**13**	25%	**35**	69%	**51**	**100%**
Urban community								
Educational level (Q3)	Those who "Strongly agree" or "Agree" (Q58)						Total respondents in the group	
	Computer literate		competent in using the internet		competent in using the library			
Basic literacy	0	0%	0	0%	0	0%	3	6%
Primary	2	29%	0	0%	3	43%	7	15%
Secondary	19	90%	18	86%	14	67%	21	44%
Higher secondary	8	100%	7	88%	5	63%	8	17%
Diploma/Advanced diploma	5	100%	5	100%	5	100%	5	10%
University (undergrad & post grad)	4	100%	4	100%	4	100%	4	8%
Total	**38**	79%	**34**	71%	**31**	65%	**48**	**100%**

Table 7.2: Educational level and information literacy

[40] No literature was available to support the verification of the publishing dates, hence the Editor of the magazine (Mohamed Bushry) was contacted and he verified the dates.

Similarly, the question in the survey about familiarity with places of information access yielded interesting results as shown in Table 5.37. The maximum number of responses for "extremely familiar" from the rural community was recieved for "bookstores" followed by "library". This is interesting given that the surveyed rural island does not have a proper bookshop as explained in the results in Chapter 5. Hence, their idea of "bookshop" is under question here. Similarly, in the absence of a public library in the rural community, their "extremely familiar" notion of library as an information source is questionable. This might be due to their conceivable familiarity, or as de Vaus (2002) states, in surveys people tend to provide answers to "look good in their own eyes and in the eyes of the interviewers" (p. 107).

Furthermore, based on the survey outcomes (Table 5.18), it is evident that the few rural participants who use the Internet use it mainly for work-related purposes and not as a source for general information. In the urban community in addition to the Internet being used for work, it is used as a general information source as well as for news, as a communication channel, and as entertainment (Table 5.18 and Table 5.31). This could be attributed to accessibility issues, but more importantly, as demonstrated in Figure 5.2, to the needed literacy skills of the majority of the rural respondents. As demonstrated by Hafkin (2002) in an African study, for connectivity to be relevant for locals there should be local content. This non-use, as explained by the NCIT official, could also be linked to how the Internet meets or does not meet the peoples' needs.

The initiatives in place to address information literacy in the Maldives are not very clear. The officials from NL and MLRIA stated that a number of awareness programs are conducted by the NL, namely events like writing competitions. The NL also highlighted their participation in various events to increase students' awareness of and use of the library. However, there does not appear to be any coordinated effort to increase the information literacy of the general public, especially the older adult. As revealed in the interviews, the NL, which is the sole information organisation in the country, has not embarked on information literacy programs.

Another issue is the lack of information awareness. As was reported by Kularatne (1997), with regard to information needs and information provision, many people in developing countries are not aware of the myriad sources of information available to those in the developed countries. This was seen in this study too. As seen in Table 5.38 many of the respondents did not realise that they do not have access to information sources.

7.1.4 Research and publication

The fourth element in the information culture discussion is research and publication. As demonstrated in Chapter 3, the Maldives has limited published material and very few scholarly writings in the local language. This situation is similar to many other developing countries with the bulk of their publications falling into the category of gray literature (Omekwu, 2003). Important areas like traditional knowledge are being lost due to the lack of a writing culture. As noted by one of the interviewees, books on the Maldives, which are limited in number, are also mainly written and published by foreigners. While the Maldives is taking strides in ICT provision, information creation is lagging behind and is almost non-existent. As this study did not focus on the publishing sector of the country it is not clear, in the absence of any literature in the area, what the situation is like in this regard. However, it is believed that publishing will be a costly endeavour with such a small population base.

All of the organisations that were interviewed were asked how they disseminated information about their organisation and its annual activities. The officials explained that in addition to the formal annual report that was sent to the President's Office, all prepared some sort of activity updates, whether on a very ad-hoc basis or in some detail. But what was common about these was that the organisations most often publicised this information on their website and print publications are almost neglected or, when used, the material is not widely distributed. As evidenced by the rural survey, only 19% of the rural community respondents have access to the Internet in terms of connectivity or access to the necessary equipment, and MPND (2007) statistics reveal that about 70% of the population are in rural/remote islands.

In terms of the existing initiatives, NCLHR, a government funded organisation, is mandated to undertake research on Maldives' history, linguistic and cultural heritage. As revealed by the NCLHR official, these are published and available for sale in their bookshop located on the island capital, Malé and sent to other islands on an ad-hoc basis. Additionally, as stated by the interviewed officials, writing and publication is encouraged by the NL in the form of writing competitions. However, this to the most part attracts literary works, especially for children. Scholarly work is rarely carried out. As stated in the situation analysis in Chapter 3, the country does not have a university and hence support for research activity is not that favourable.

One main area identified to be documented and preserved as revealed by the NL and NCLHR is the capturing of the traditional knowledge and historical information held by the elderly people. However, there does not appear to be a concrete plan or strategic direction in this regard.

As seen from the discussion so far, the Maldives has traditionally had an oral knowledge system, but interestingly they are taking to blogging as evidenced by the popularity of mvblogs.org, and this could be the beginning of a self-publishing trend to come with this a cultural shift from verbal to writing. This cultural shift is similar to what Bauchspies (1998) explains as the evolving nature of electronic communications leading to changes in cultural identities.

As evidenced in the earlier discussions there is a need for local material with relevant content to be produced to thus encourage reading and increasing the general awareness of the people. The challenge in this endeavour as identified by the official from NCLHR is the necessary human resources, specifically the small number of interested intellectuals in the Maldives and the difficulty of collaborative efforts by scholars in this highly disbursed country. Furthermore, even if ICTs are seen as a promising venture in overcoming the remoteness and in reducing the cost of publications, it is important that the use of ICTs and similar strategies take into account the available facilities at the disposal of the people.

7.1.5 Library and information services

The fifth element in this discussion is library and information services. As seen in the situation analysis, the Maldives lacks public libraries that are accessible to the majority of the population. Moreover, the country does not have a national archive and the national collection in the NL is not comprehensive. This creates a void in the available reading material and information exchange.

As demonstrated earlier, libraries are an important element in enhancing the information culture of a country as it promotes the free flow of information, spread of knowledge and promote reading and writing (Tucker, 2003). However, in a study of Mongolian information seeking behaviour, Johnson (2007) reported that in developing countries, even where libraries do exist, libraries most often tend to operate as study spaces or as a source of textbook, instead of catering for the information needs of the community. This appears to be true even in the Maldivian context as highlighted by the interviewed NL officials who placed a greater emphasis on catering for the needs of the students either in schools or in tertiary education centres.

The NL, in addition to being the country's national library, is also the only state-owned public library in the country, and it is located in the urban capital, Malé. Based on the available documentation, the remaining 195 islands do not have access to a public library. According to NL officials, there are privately-owned libraries in many of the atolls. It has to be noted that the statement is very ambiguous as each atoll has on average 10 inhabited

islands. Furthermore, regular inter-atoll transport is also not available on a regular basis (Latheef & Gupta, 2007). Many of these libraries may or may not be providing a community service, functioning, or accessible to the public. Moreover, there is no clear documentation to verify the existence of these libraries other than a listing held on the NL registry. And, given the geographical dispersion of the islands and transportation difficulties, the public library in Malé is not readily accessible to the rural community.

In addition to public libraries, the existence of school libraries is also limited. As was stated in the situation analysis in Chapter 3, there is at least one school on each of the 195 rural islands and some islands have more than one school but as identified by Habeeb (2006) there are only 63 rural school libraries.

The surveyed rural community does not have a public library in their community at all. This was verified by the researcher in consultation with one of the Island Chiefs who informed how, sometime back, there was a small community library managed by a volunteer group. Therefore, it is questionable as to what the rural respondents were referring to when seven of them stated that they had access to a public library in response to Q42. It can only be deduced that they were referring to the library at the island school. It should be noted here that the concept of a public library as understood in a Western sense, is not common in the Maldives. There is no local term for a public library and hence, in the Dhivehi survey questionnaire, the word "public library" was used without any translation and it is not clear how this was interpreted by the respondents.

What is evident from the data in Table 5.27 is that a vast majority of the participants, especially in the rural community, have never used a library. As demonstrated in the literature review, libraries and information services play a central role in promoting reading and writing in developing countries (Johnson, 2007). However, given the low use of the public library in the Maldives, even by the urban community, and the lack of library service provision for the majority of the population who are located in the rural islands, an alternative model of information provision might be necessary. School-community joint use libraries as advocated by Bundy & Amey (2006) could be a worthwhile initiative to explore. Or, the *Arcas das letras* project which involves community participation in imparting literacy to the rural Brazilian communities through mobile libraries could be an alternative method (Chaib & Gillen, 2007).

As explained by NL officials, mobile library projects have been conducted by them on an ad-hoc basis and it is evident that these have not been very successful. Furthermore, to compensate for the lack of access to public libraries in the islands, the NL has introduced a three-week loan period to the rural members compared to the two-week period granted to the

urban community members. Given the distance of the rural islands from the urban capital Malé and the lack of a reliable regular inter-island transport infrastructure, this might not be enough flexibility for the rural community to be enticed into utilizing the public library in Malé.

Apart from the public library provision, the national library component of NL is also not in an ideal situation. According to NL, attempts have been made to create an authoritative national bibliography. The first bibliography was published in 1995 and in response to a survey conducted by International Federation of Library Associations, the NL stated that the "unsuccessful effort to compile a complete and comprehensive bibliography of all national publications is still highly constrained" (Knutsen, 2006, p. 15) as the NL has not been in a position to receive all national publications due to the lack of a national depository law. A depository law was adopted in early 2006, yet according to the NL officials, work has not commenced under this law.

Furthermore, as discovered from the interviews with NL and NCLHR officials, it is evident that they do not have the level of cooperation with each other that might be expected given their dual role in the safeguarding of the national collection. There also seems to be a lot of duplication of work in terms of collection of documents, as well as in preservation and conservation efforts between these two government organisations.

As agreed by the interviewed officials, national documents are part of the country's heritage and for this reason the establishment of a National Archives is a very important information initiative. As revealed by the officials from NL and MLRIA, the concept of a National Archive is something that has been considered, on paper, and discussions have been undergoing for a number of years, yet action has not been forthcoming at a reasonable rate.

In order to address access to libraries by the rural community, the officials from the NL and MLRIA stated that in addition to the planned mobile library provisions, discussions are also underway for the establishment of branch libraries of the NL in the already established Atoll Media Centres. According to the officials, the materialisation of these discussions to action plans is slow given the challenges of staffing, lack of reading material, and financial limitations. The interviewed officials have aspirations of using the post as a means of service delivery in the near future to overcome the physical isolation.

In terms of the needs of the people, the data in Table 5.27 demonstrated that both communities would like to have access to a public library. The survey also reveals that people are, in general, not aware of the available information services in the Maldives.

As explained by the NL officials, the challenge in provision of library and information services to the rural community is the geographic dispersion of the country into small island units with very few people on some of the islands. The establishment of libraries on each of the islands will be a very costly exercise. The establishment of a mobile library appears to be the obvious solution, however, the 196 islands separated by the ocean presents challenging issues in providing a mobile service. In all organisations interviewed, a common challenge in the provision of services was that of constraints on financial resources and the lack of qualified human resources. Another issue that was raised at the NL interviews was staff/client interaction, which was poor at the moment, mainly due to the untrained library personnel.

7.1.6 Mass media

The sixth element in this discussion on information culture is mass media. The responses to questions on information sources (in Q49 to Q57) show that the main sources of information for the Maldivians are radio and television, and newspapers to some extent. These findings were similar to those in a study on Mongolian information seeking behaviour, where television and newspapers were the first two choices of information sources for the respondents (Johnson, 2007). Additionally, Stilwell, Leach & Burton (2001) outline that in many African countries, radio is still among the most accessible, most used, and most economical information disseminator.

According to the responses to the survey shown in Table 5.13 there appears to be virtually no difference between the rural and urban communities in terms of access to radio and television and associated media like DVD players. Almost all respondents also stated they had cable TV in their household. As reported earlier, access to newspapers is confined to the urban community, with out-dated access to newspapers by the surveyed rural community.

As seen in the situation analysis and verified by the interviewed officials at MLRIA, until 2007, the Maldives had only one radio and one television station and these were state-owned. In line with the government reform movement, and popular demand, private broadcasting was facilitated in 2007 on a contractual basis until the necessary legislation comes in place. The other change that has occurred during the past few years, as further explained at the interviews, is in the way information was disseminated from Malé to the wider community as a one-way information exchange. According to the interviewed officials, with the establishment of the media centres, news from around the country is now broadcast throughout the country.

However, at the time of the rural survey in December 2007, it was witnessed by the researcher that the mode of information provision in the rural community was very different to that of the urban community. Information and news from Malé and about Malé becomes public knowledge for the entire country through radio, television, and newspapers. However, the dissemination of information from the rural community is mostly confined within the island boundaries as they use a loud speaker system located in the Island Office for the dissemination of news.

Other than this, as seen in Table 5.12, information is exchanged verbally and in most case face-to-face. Taking this into consideration, it was not surprising that "family", "friends", or "neighbours" were cited as the mostly used information sources for news, health issues, employment opportunities, and community services by the rural respondents (Tables 5.32 to 5.36). These "informal" information sources were cited by the urban community too, but to a lesser extent. Spink and Cole (2001a) also found this to be the case in their study of low-income African American households, where the residents' information-seeking channels were mainly family and neighbours with a lower use of external channels.

According to the officials from MLRIA, the Maldives has embraced press freedom and freedom of expression within the last few years. And as is evident in the situation analysis and verified by the officials, self-censorship of writing and thought was widely practiced until recently; the situation is improving with the government's relaxation on the earlier prohibitions following the reform process initiated in 2004. As agreed by the officials from MLRIA, this has led to an increase in the print media. According to MoIA (2007b), there are 6 daily newspapers, 15 magazines and over 70 other registered publications, of which, 25 publications are currently in regular circulation and are predominantly in the local language.

The planned initiative, according to the officials, in the context of mass media, is the provision of up-to-date newspapers to the rural communities. The interviewed officials reported that they were aware of this issue and that discussions are underway to address this. The other alternative, as revealed by one of the officials, was in encouraging and making provision for the uptake of online versions. However, this needs to take into consideration the accessibility and information literacy issues of the rural community.

As seen in Figure 5.11, television appears to be an important source of information for news for the communities. While, in both communities, this uptake was made up of an almost equal ratio of the respondents, it is not clear if there is a distinction between both communities in terms of the type of news sought as this detail was not sought. Cable TV has also made it easier and cheaper to access foreign TV channels compared to the earlier satellite version and it is generally believed, based on comments from the officials, that cable

TV has taken over local TV. However, one of the officials from MLRIA said that popularity of local TV has increased in recent times with the increase of local content. This claim cannot be verified as there is no study in this regard, and the survey did not yield useful results due to a shortcoming in the design of the relevant question. However, it is noticeable, in the results received for Q21 and presented at Appendix 12, that foreign channels accessible on cable TV are very popular among both communities.

The reliance on verbal versus written information is seen in most of the areas of information access that were addressed in the survey, and it is more prominent in the rural community. The information source that met their overall information demands, as seen in Table 5.30, appears to be television for both communities followed by radio in the rural community, and newspapers in the urban community. In the urban community, the least used information source for community services and activities was "neighbours". This response was very different for the rural community, which portrayed a more traditional verbal approach. Based on the survey outcomes, this difference in approach can be linked to the educational level (Table 5.7) and the information sources (Table 5.14, Table 5.16, Table 5.24, and Table 5.27) at the disposal of the communities.

According to the interviews, the officials from MLRIA see the main challenge in provision of up-to-date newspapers to the rural community as again, the geographic dispersion of the country and the expensive inter-island transport. However, as described in the research methodology, Chapter 4, the surveyed island was one where there is a semi-regular ferry service during the weekend. Seventy two percent of the rural respondents cited "non availability" as their reason for not buying newspapers. This illustrates that the price of newspapers is not a major factor. Given the transport situation for this rural community, it is easy to conclude that, with some planning, they could at least be provided with the weekend edition of the newspaper if it was dispatched by ferry. The interviewed MLRIA officials did explain that boat owners do not agree to carry heavy luggage.

7.1.7 Information policies

The last element presented in this discussion is information policies. To address the challenges in information provision, a national information policy is essential for efficient use of the limited resources, especially for developing countries (Bender, Kadec & Morton, 1991; Raseroka, 2001).

It was found in the situation analysis, that there exist important relevant policies like Maldives Telecommunication policy, Science & Technology Master Plan, and the National Legal Depository Law; while, other important policies like Freedom of Information and

copyright laws were non-existent. The interview with NCIT official revealed that, contrary to the researcher's belief, NCIT had no connection with the Science & Technology Master plan and the telecommunication policy; hence, the status of these could not be further verified.

As earlier discussed, the National Legal Depository Law adopted in early 2006 has not been realised for the lack of an of enabling legislation and the Freedom of Information Bill was sent to the Parliament by MLRIA in 2006 and debated at the Parliament during November 2007, but did not get the necessary number of votes for it to be passed. Rowlands (2003), states that information policies, specifically a national information policy, are the backbone that holds the information services and initiatives intact. Conversely, neither the situation analysis nor the interviewees revealed any reference to a national information policy. Nevertheless, according to the officials and MoIA (2007b), a number of important information policies have been introduced or drafted in the last couple of years. These, in addition to the ones mentioned earlier, include Bills on: Freedom of the Press, Maldives Media Council, Broadcasting, Registration of Publications, and Cable TV Services in the Maldives. In the unfortunate event that these Bills face rejection by the parliamentarians, MLRIA has, as explained by the interviewees, enacted special Rules by a special Presidential Decree to establish a semblance of regulation. In this respect, private broadcasting was allowed in 2007 under a special contract as the Law is still in the process of being adopted and Freedom of Information was granted under a special decree by the government in early 2008 until the Bill can be debated at the parliament again. An important policy still at the drafting stage is copyright law.

The creation and adoption of these policies is challenging for the Maldives. According to the officials from MLRIA, a number of Bills on information have been forwarded to the Parliament for adoption. However, many of these have faced rejection and have been sent back to the drafting process. As was found from the interviews, there exists a culture of information withholding and the information creators appear to take a custodial role. The failure to adopt the Freedom of Information Bill in Parliament as explained by an MLRIA official can be associated, to some extent, with this phenomenon. This reactive culture appears to prevail in the Maldives and is associated with other similar countries as was demonstrated by Ramjaun (1997) in Mauritius.

Furthermore, history shows that in the Maldives, some important Bills take a long time before they can be adopted, even after approval is received from the parliament. Such is the case with the National Depository Law. According to the officials from the NL, it has taken over a decade to lobby for such a law and the passage was slow through the parliament. The

lack of a copyright law hinders intellectual creation as there is no protection under the law. Furthermore, as validated by the officials, it is understandable that there will be resistance, especially from the performing industry, on the adoption of such a law as, at present the performing industry is rife with acts against copyright laws.

7.1.8 Summary

In summary, the Maldives information culture can be defined as "paperless", not in the modern online sense, but more in terms of the high reliance on verbal information interchange for their everyday needs. The broadcast media and verbal information exchange predominate over print media. Reading as a leisure activity is present to some extent. However, reading as an intellectual activity is very limited. Information that cannot be gained from the broadcast media is sought out from professionals in the relevant area. To a greater extent, self-reliance on individual experience and knowledge is exercised especially in areas like fishing and agriculture. Library use, as an information source is very low, even where it exists, but many of the respondents stated they would like to have access to a library. Adoption of ICTs is swift and is promising. However, even if the population is literate in the local language, a significant group within the community lacks the necessary English language literacy to benefit from the online information environment. There do not appear to be major differences in the use of information among the rural and urban community; the difference is in the level of access to information sources and the respondents' information literacy skills.

A number of important information initiatives have been initiated in the Maldives in recent years. Yet, there is only one public library for the entire Maldivian community of 196 islands, and there is no mobile library to cater for the rural communities. The establishment of mobile libraries is under consideration. There are also plans to create an online government portal to facilitate interaction with the government services; and a free access terminal is planned to be established in each of the atolls. Most of these planned initiatives are aimed at the atoll level, which leaves many islands without access to these information services as they are not interconnected due to the absence of a transport system.

Radio and television are the main authoritative information source for the entire community. The important information dissemination initiatives undertaken include the establishment of media centres on each of the atolls and the introduction of necessary laws like the national depository law and Freedom of Information Bill.

Furthermore, there does not appear to be any significant difference in information needs and use among both communities. The difference, as stated before, is in the level of access. To a

great extent, information needs are met by "informal" channels like own experience, friends, neighbours and relatives. Radio and TV meet many of the information needs for both communities, while newspapers play a significant role in the urban community. While weeklies are read in the rural community it was significant that daily newspapers are more popular among the urban community. This is reflective of the absence of regular newspaper supplies to the rural community. The urban community reads more non-fiction (other than religion-related) material and have access to it. Due to a shortage of local literature in the local language, there is a chronic shortage of reading material for the elderly population who are not well versed in the English language and this also acts as a barrier to using the Internet as an alternative information source.

The challenges associated with the implementation of information services are mainly centred on the geographic dispersion of the country into hundreds of small island units without a proper transport infrastructure. As an indirect result of this dispersion, there is a chronic lack of information awareness and low information literacy, especially in the rural community. This is further exacerbated by the language barrier given that the majority of the population is not English literate while the country relies on foreign information sources, especially in terms of books.

Other major challenges are the financial and human resource constraints. Financially, the country is not in a position to equip all the individual island units with all the possible information sources that they may need; the financial situation also limits the number of qualified information personnel to work in these areas. Finally, the lack of a national information policy reduces the efficient use of the limited resources.

7.2 Issues in research design

This section discusses the methodological issues, and the limitations of this study that were not initially foreseen and included in Chapter 4 on research methodology. Issues that emerged in the survey implementation, sampling and questionnaire design are reflected upon, as is the extent to which the results from this study can be generalised to the entire Maldives community.

7.2.1 Survey implementation

The field work experience in both the communities had their own distinctive qualities that could add more meaning to the quantifiable results discussed above. It was relatively easier to recruit participants from the rural community compared to the urban. The rural

community was more obliging and also appeared to have time on their hands, while the people approached in the urban community appeared to be rushed and preoccupied with other pursuits. This could have important implications in the design of information service provisions to cater for their needs

More rural community participants chose the interview style of questionnaire completion. As outlined in the results chapter, this could be reasonably linked to their educational background. However, their obliging nature, and/or their apparent lack of time pressure could be important variables in this tendency.

This study's door-to-door and face-to-face data collection process increased the response rate and ensured a valid cross-section of the community as the self-selecting bias associated with postal questionnaires is minimised (Kumar, 2005). However, the ethical implications of this approach are under question as it can become invasive and borders on issues of the privacy and anonymity of the participants, especially in such small close-knit communities as experienced in this project.

Where the questionnaires were left to be completed at the participant's convenience, the questionnaire completion may have resulted in a group answer rather than an individual response. As earlier explained, the Maldives culture and social situation is such that each household has quite a few people living under one roof, making it difficult to get anything done at an individual level. This was observed to have happened on at least two occasions where the researcher was a little early to collect questionnaires, which were to be picked within a 20-30 minute period. A statement, requesting the respondents to express their own opinion at the beginning of the survey could have helped in rectifying this situation (Kumar, 2005). Furthermore, a different research approach, for instance focus groups, could have been a better alternative to the community survey, given the cultural situation.

7.2.2 Sampling for the survey

The every five-house approach in participant recruitment did not go according to plan in many cases in both communities. In the rural community, it was difficult to recruit respondents because there were not too many people around, and in the urban community people were too busy and relatively less cooperative. Furthermore, to balance the gender representation, the every-five house approach was abandoned altogether on the last days of participant recruitment in favour of approaching places where men could be purposefully approached. The difficulty of recruiting men for studies is not a new phenomenon, as was also found by Zaverdinos-Kockott (2004).

7.2.3 The survey questionnaire

The specific questions that posed problems at the analysis stage include Questions 21, 22, 36, and 42 to 48.

Question 21 aimed to identify the level of use of local TV verses cable TV. Differentiating the popularity of local programs versus foreign content on cable TV was one reason why this was presented as an open-ended question as it would be impractical to list all of the possible options. As mentioned in the survey results chapter, the responses received were varied as expected, but impossible to be used in a meaningful analysis. The same was true for Q22 seeking information on programs listened to on the radio.

Question 36 asked the respondents to list any newspaper/magazines they knew. This was posed as an open-ended question, since listing the major newspapers including the anti-government titles could be misread as a politically-oriented question, as was also explained in Chapter 4 in the section on ethics. This was one of the questions with the highest non-response rate with 9 (17.6%) rural respondents and 17 (35.4%) urban respondents not answering this question. This highlights the importance of pre-set answers in motivating responses to surveys (de Vaus, 2002).

The issues with questions 42 to 48 were more culturally-oriented. Even though the "I don't know" and "No" respondents to Q42 were asked to skip to Q47, many respondents did not follow this instruction. Question 42 asked if the respondents had access to a public library and if they said "No" they were directed to Q47. Yet many of the respondents went on and answered Q43 to Q46. Similarly, 20 of the 26 respondents from the urban community who said "Yes" to Q42 went on and answered Q47 when they were directed at Q46 to skip Q47 and Q48. The reason for this, as explained before, could be that the term "library" and "public library" have no distinction in a local Maldivian context.

Overall, it was felt that the questionnaire was too long to appeal to prospective participants. The length of the questionnaire also had implications in the analysis and presentation of results in this thesis, as there was simply too much information. The questionnaire would have been much shorter if it were aimed at one community. To take into account the varying level of information access in both communities, a number of questions had to be included which would not be applicable to one or the other community.

7.2.4 Generalisation of results from the survey

The relative isolation of each individual island raises the level of generalisability of the results from one rural island community to another. Additionally, while the one- language

component is a positive attribute in any discussion about information delivery in the Maldives, the dialectical difference of the language needs to be taken into consideration, especially in the southern islands where there is considerable variation. Hence, questions about addressing their information needs remain.

A survey of more rural communities would provide insights beyond those offered in this study. However, even though the Maldives is a small country, given the high cost of transport and the absence of a postal system, such an exercise in this context would be very costly.

7.3 Conclusion

It can be reasonably concluded that the information culture prevailing in the Maldives is very much reliant on verbal information interchange as demonstrated in the high usage of traditional knowledge especially in agriculture and fishing. Reading is generally confined to Islamic religious texts, while other general reading is done by educated individuals, with more people inclined towards light and casual reading. There is also a vast information gap between the rural and urban communities, with the urban community having more access to information sources and services. Interestingly, there is not much difference in the take-up of the available information services among both communities. The information initiatives in place and planned in the information sector are promising, yet much more needs to be done to address the information needs of the people and to create an informed populace to support development of the Maldives. The main challenges associated with a more robust and equitable information service to the Maldives community include the geographic dispersion of the country and limited financial and human resources.

The following chapter, Chapter 8, summarises the main findings of this study and outlines recommendations for future information initiatives.

Chapter 8: Conclusions and recommendations

This concluding chapter summarises key conclusions arising from this research project. This chapter has three main sections and is reflective of the aims and objectives presented in Chapter 4 on research design. The first two sections, key findings and recommendations, answer the two research questions of this study and the last section is an overall conclusion to this document.

8.1 Key findings

This section addresses the first research question: *how effective are the existing and planned information initiatives in place in the Maldives?*

- One very significant issue in information access is the lack of public library services to 70% of the country's population. The existing public library does not have enough provision, in terms of its services and accessibility, to cater for the entire Maldives community. Furthermore, other information services like the national archive is non existent and the National Library is not in an ideal state.

- Traditional broadcast media are still the most reliable, most popular, and the most economical information source for the entire Maldivian community. However, given the social situation, especially in Malé where whole families live under one roof, the actual usability of these services for a meaningful information exchange is questionable.

- Coupled with this, the lack of reading material, especially local content, limits the information seeking avenues for the general public. One highly efficient method of overcoming these barriers could be the Internet given its "on demand" nature and unlimited information sources. However, the usability of this media will be very limited; the paradox in the rural setting is the difficulty in access, affordability issues, and relevant content in terms of language.

- Scholarly writing and intellectual reading appears to be very low. However, this study, because of its general approach as well as the sample selection of random people from the general public, does not address this area of inquiry adequately. A more concrete deduction on this basis could have been made if there were a substantial number of academics (at tertiary level) in the survey sample. The general reading habits are very casual and there is a strong oral information exchange with an emphasis on personal contact for information seeking.

- The NCLHR and the work of the national section of NL appear to be complementary, and some duplication of work exists, like the case with the national collection at the NL and the national collection at the NCLHR library. Both places are located only 15 minutes walking distance away from each other. Given that the main challenges in effective information service provision include manpower, expertise and physical space, it is believed these resources can be more efficiently and effectively used with a synergy/merger between these two institutions.

- Creation of local content, to cater for the majority of the population who do not have the necessary English language literacy, is almost non-existent. Newspapers and magazines are the most popular forms of reading and these are also generally accessible in the urban community.

- In terms of the adoption of information policies, the late introduction of a depository law, the time taken for the lobbying, and the failure to implement the law over the last two years for the want of an enabling legislation is concerning. Other important information policies, like the Freedom of Information Bill, have been debated at the Parliament and yet did not get the necessary votes to pass, indicating an inbred culture of withholding information. More importantly, intellectual creation is stagnant in the face of the lack of a copyright law.

- Getting print material to the outer parts of the country in a timely manner is difficult or impossible. This is mainly associated with the dispersed nature of the country and the high cost of transport between islands. Paradoxically, this also is seen as the reason for a lack of a transport infrastructure and lack of a postal system. The use of ICTs is a theoretical possibility to overcome many of the problems of information provision, but practically it is not that feasible given the 196 physically separate inhabited island units coupled with the lack of financial resources.

Based on these observations, to answer the first research question of this study, it can be concluded that in general the existing and planned information initiatives do not match the information needs of the people effectively. There appears to be a misalignment of information services, like the utilisation of the Internet as an information gateway when the general public do not really have access to the required technology, or do not use Internet to find information. The provision of basic services like public libraries needs to be prioritised, for, public libraries are free, a more accessible information source, and promote reading and literacy. Additionally, there is a greater need to address the information needs of the entire

community by information providers, specifically for the adult population, instead of the current predominant focus on school children.

8.2 Recommendations

This section reflects objective 6 of this study and addresses the second research question: *what changes are required in the information culture of the country to lead to development?*

Based on the findings of this research project, there are a number of matters that can be addressed to improve the information situation in the Maldives in both the short-term and long-term.

- It is understood that MLRIA is considering options for dissemination of newspapers and other print media to the rural communities. This can be addressed in the short-term by utilising the available transport infrastructure, for instance, making arrangements for the provision of the weekend edition of the newspaper if there is a weekend ferry service to a given island, as is the case with the rural island included in this study.

- Community centres need to be established in the rural islands where the public can easily access the Internet or utilise other ICT facilities in order to have equitable access to the reading material, at least to an online version. At present, conceptual plans do exist with the like of telecentres. A follow-up on the telecentre initiative is important for this reason. The establishment of information hubs on each island is essential. Instead of the establishment of smaller units by different organisations, a cooperative effort is essential for efficient use of the limited infrastructural, human, and financial resources. For instance, a cooperative program with the already established media centres and the planned telecentres could be explored. The role of the media centres needs to be revisited and action taken to ensure liaison with the NL to provide a useful library service at these centres.

- Establishing separate library buildings in each individual island will not be the most feasible or sustainable option given the small population base of many of these islands and the limited financial and human resources. The best alternative would be the establishment of a mobile library project, probably as a *Dhoni* or a boat library. A fully functional library could be created within a *Dhoni* or a boat, with areas for book shelves and a reading area with tables and chairs. Each atoll could have one physical library, or an information hub, as its centre with the Mobile *Dhoni* library reaching all the other islands within the given atoll. This *Dhoni* library could be manned with a professional librarian and an assistant in addition to the *Dhoni* crew. It is recommended that a feasibility study of a similar approach be conducted as soon as possible and a pilot project be implemented soon.

- Until an alternative arrangement could be made to cater for the general public, school/college libraries, where available, could be utilised as community libraries as established in Thailand (Butdisuwan,1999) and rural South Australia (Bundy & Amey, 2006). Additionally, in the absence of physical libraries, the feasibility of book boxes, as organised in Brazil (Chaib & Gillen, 2007) could be tested with each household receiving a book box for a period and then exchanging it with another book box from another household. This would require the cooperation of the community and relevant authorities in maintaining the collection and enabling its rounds.

- The strengthening of the inter-atoll postal system would enhance the existing culture of information exchange to a greater extent with the possibility of posting inter library loan items, from participating libraries, on demand.

- In addition to the establishment of these services, more effort needs to be made to create content that will be useful and applicable to the people. Local content needs to be created, either through translation of popular material, or the writing of new material. In this regard, writing and publication needs to be encouraged. The best possible cost effective alternative for this would be educating the community in Internet use so they are able to engage in content creation and dissemination.

- The legal depository law needs to be activated with the enabling legislation to build up a comprehensive national collection. MLRIA needs to identify the responsible body for this task and work should begin immediately.

- The copyright law is one of the essential pieces of legislation that would boost intellectual creation by safeguarding intellectual property and encouraging innovation. Hence this needs to be pursued further.

- For the preservation of archival records for future generations, the situation with the establishment of the national archives needs to be addressed promptly.

8.2.1 Further research

This study was exploratory in nature and covered a very broad area. It is recommended that further studies be carried out to identify areas that need to be addressed to enhance the information culture of the Maldives. These might include:

- Identifying the reading habits in more detail to understand what people read, in what language, and how the material is accessed and selected.

- The significance of alternative language skills in the Maldivian society and its information situation is an area that might need to be studied further. Specifically, the demonstrated ability of Maldivians to understand Hindi language shows the appreciation of Indian popular culture. Furthermore, the lack of general comprehension of the Arabic language, while the Quran in its Arabic form is widely read, also begs more clarity.

- The NL officials mentioned quite often that they have plans to bring the libraries in the rural islands to one standard. What standard, one might ask, given the absence of any branches of the NL on any of the rural islands? It is important to identify what libraries the NL refer to. As such a detailed situation analysis of the existing school libraries and privately owned public libraries would be an important guiding document for further planning and for networking of these libraries.

- The feasibility and sustainability of a mobile *Dhoni* library as an inter-atoll project or even a country-wide project needs to be conducted.

- The extent of the relevance of ICTs in information provision in a Maldivian context to the rural islands or to the elderly population needs to be further clarified.

- Identifying the research and publication situation existing at present and identifying the challenges associated with the development of this environment requires further study. In the absence of a publishing culture, there might be important historical manuscripts written by Maldivians in the local language but not widely distributed.

- Since this project has addressed the information culture of the adult (18 years and above), a comparison of the information culture of younger generation would enable further research.

8.3 Conclusions

This exploratory study on the Maldives information culture – based on the survey of communities in rural and urban setting, and with the insights from information officials – highlighted that there is a huge disparity between the information service provisions to the rural community and to the urban. The survey results indicate that the difference is in the level of access, not in the actual usage. Even in the rural community those who have access to resources use them just as much as those in the urban community.

There is a strong oral culture of information exchange with a casual reading approach. Most of the survey respondents tend to believe that information is very important and many also

believe that they have all the information they need. This was one observation that is very important to pursue further as this highlights the lack of awareness on information access and use, especially in the rural community.

The research methods utilised in this study were the most appropriate given the nature of the study and also given the culture and situation of the Maldives. There were issues in participant recruitment for the survey given the rural community's lack of confidence in participating in similar exercises, and the congested housing infrastructure and the chaotic lifestyle of the urban island Malé. The researcher, although a local, was presented with obstacles that were not fully comprehended before the actual fieldwork.

The interviews with the information officials clarified gaps in the situation analysis and were particularly useful to identify the challenges associated with their service provision. These ranged from the dispersed nature of the country, lack of human resources and financial constraints.

The conceptual framework proposed in this project to study societal information culture is believed to be a useful framework in related endeavours for other similar countries.

This thesis has demonstrated that the Maldives has some very important information initiatives in place and others that are planned. The changes that are foreseen are in providing equitable information access to the rural communities, increasing information awareness, swift implementation of necessary information policies, documentation of traditional knowledge and encouragement of research and publication.

This exploratory study of the information culture of the Maldives, because of the broad nature of the topic, may seem somewhat abstract. However, it is believed that the research has great significance and relevance in a country with very few empirical studies in this area, or any area for that matter. The recommendations arising from this thesis are worth pursuing and it is believed they will help charter the course of the Maldives' information culture for a better future.

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