7. ICT for Elderly

"We will all grow old one day – if we have that privilege. Let us therefore look at older persons not as people separate from ourselves, but as our future selves. And let us recognise that older people are all individuals, with individual needs and strengths, not groups that are all the same because of their age……I turned 64 today. I therefore feel empowered to quote a Beatles' song and that asks, on behalf of all older persons, and I quote: 'Will you still need me; will you still feed me, when I'm 64'? I trust the answer is yes, older people will be provided for, and yes, older people will be needed, in the twenty-first century."

Secretary General - Kofi Annan,
Second World Assembly on Ageing in Madrid, Spain. - 8th April 2002.

Viewed as a whole the problem of ageing is no problem at all. It is only the pessimistic way of looking at a great triumph of civilisation. … Notestein, 1954

Population ageing is one of humanity's greatest triumphs. It is also one of our greatest challenges. In the 21st century, global ageing will put increased economic and social demands on all countries. At the same time, ***older people provide a precious, often-ignored resource that makes an important contribution to the socioeconomic fabric of our lives.***

Older persons are intermediaries between the past, the present and the future. Their wisdom and experience form a veritable lifeline in society. ***In Africa, it is said that when an old man dies, a library vanishes.***

Population ageing raises some **worrisome questions** for policy-makers, decision-makers in governments at all levels, the non-governmental sector and the private sector.

- Will a proportionately smaller number of working adults be able to provide the support that older people need?
- Will large numbers of older people bankrupt our health care and social security systems?
- How do we help older people remain independent and active?

- How do we best balance the role of the family and the state when it comes to caring for older people who need assistance?
- **How can we best make use of older people's wisdom, experience and talents?**
- **Now that people are living longer, how can we improve the quality of life in old age?**

The numbers of elderly persons are increasing rapidly in both the developed and developing worlds.

Ageing is definitely no longer just a "first world issue". What was a footnote in the twentieth century is on its way to becoming a dominant theme in the twenty-first century.

We have reached the point where the numbers of older persons in the developing countries exceed those in the developed world.

The World Health Organisation suggests that we can afford to get old if countries, regions and international organisations enact "Active Ageing" policies and programmes that enhance the health, independence and productivity of older citizens. The time to plan and to act is now.

We need to explore the concept and rationale for **"Active Ageing**" as a goal for policy and programme formulation. Active ageing is built on three pillars: ***health and independence, productivity, and protection.***

It is also indispensable to pursue evidence about the factors, which determine whether or not individuals and populations will enjoy independence, productivity and a positive quality of life in older age.

United Nations fundamental objective is ***'building a society fit for all people of all ages.'***

7.1 Report of the United Nations –Second World Assembly on Ageing Madrid 8-12 April 2002 states that:

"The priority directions are designed to guide policy formulation and implementation towards the specific goal of successful adjustment to an ageing world, in which success is measured in terms of social development, the improvement for older persons in quality of life and in the sustainability of the various systems, formal and informal, that underpin the quality of well-being throughout the life course."

"...the transition to a positive, active and developmentally oriented view of ageing may well result from action by elderly people themselves, through the sheer force of their growing numbers and influence. The collective consciousness of being elderly, as a socially unifying concept, can in that way become a positive factor" (International Plan of Action on Ageing, 1/ Para. 32).

7.2 National Policy on Older Persons Plan of Action 2000-2005

The well being of older persons has been mandated in the Constitution of India. The Government recognises that though it has to play a very important role in realising the goals of the Policy, institutions of civil society, individuals, families and communities have to join hands as active partners. National Policy on Older Persons - Plan of Action (2000-2005) is intended to make a difference in the lives of senior citizens.

The initiatives as per the Plan of Action (2000-2005) are to be implemented by various Ministries. Let us look at one of them:

Ministry of Information and Broadcasting

- Subjects concerning older persons will be identified, programmes produced, and time allocated for their broadcast.
- The concept of active ageing will be promoted.
- Programmes will be targeted at older persons so that they can enrich and update their knowledge, and transmit more effectively socio-cultural heritage to their grandchildren.
- Interaction between media and persons active in the field of ageing will be facilitated.

- Organisations concerned about ageing issues will be requested to institute Awards for the best reporting on ageing in print, radio and television in English and the regional languages.

Thus, if we herald to propose a plan of action to operationalise the "Active Ageing" policies and programmes, we need to integrate the policies and recommendations of the national and international plans of action on ageing within the framework of a holistic assessment of the status of elderly in terms of Independence, Disability in Multiple Dimensions of their lives and their Quality of Life in collaboration with the infrastructure and service utilisation setup. Not only multi-sectoral coordination incorporating the NGOs, CBOs, health, housing, social welfare, financial and legislative services from public and private sectors need to support the government, but also the active involvement of the elderly themselves in choosing means to fulfil their needs is a crucial element that cannot be ignored without which, improving their quality of life cannot become a reality.

It amounts to nothing less than a comprehensive plan of action based on comprehensive multi-dimensional assessment of independence, disability and quality of life of the elderly, the existing formal and informal supports and infrastructure for care, to initiate progress and development of elderly in the 21st century to build a society for all ages in India.

7.3 Definition of Ageing

Ageing of the population is defined as increase in the proportion of population aged 60 years and above. The elderly person is defined as a person who has completed 60 years or more. The United Nations generally uses age 60 as the lower limit to define elderly population (United Nations, 1993, 2005). The national practices, however, vary in defining the aged. In developed countries where considerable ageing in populations has occurred, and where people are healthier and where life expectancy is very high (75 years and above) the elderly is defined as a person of 65 and over. The census of India, although provides data on age in quinquennial age groups upto age 80, identifies the elderly as one aged 60 years and above. India demographers while studying the demographic and socio-economic aspects of elderly have used the proportion of persons of age 60 and above as an indicator of ageing (Visara, 2001,

Ashish Bose 1987, Registrar General 1999, Iruduya Rajan 2004, 2006). Demographers and sociologists sometimes categories the elderly in three groups: young old age aged 60-69, old age 70-79 and oldest old aged 80 years and above. In developed countries the elderly are generally categorised in following age statements:

- Aged 55-65 as young old
- Aged 66-85 as old and
- Aged 85 years and above oldest old (James R. Carey, 2003).

7.4 Elderly in the World – Current Scenario

Before presenting information on ageing in India, it will be helpful to know the situation of elderly in the world and more developed and less developed regions of the world. Table 9 below describes the numerical situation of the elderly men and women in the world and more developed and less developed regions of the world in 2005. According to Table 9 below; there were 6.5 billion persons in the world of which 672 million 10.4 present were elderly persons of age 60 years and over. The ageing is more advanced in the developed regions where the elderly account for 20 percent of the population as opposed to 8 percent in less developed regions. In terms of absolute number the situation is reversed; in 2005 there were 244 million elderly in the developed regions and 428.3 millions elderly in developing regions.

Median age of the world population in 2005 was 28 years and that of more developed and less developed region was 38.6 and 25.6 respectively. Thus the median values indicate that more developed regions of the world are considerably advanced in ageing, compared to the less developed regions. Size and percentage of population age 60 years and above by sex in world, more developed and less developed regions in 2005.

Table 9: Elderly Population in World

	Total Population	**Population age 60 years and above**		**Median age**
		Number	**Percent**	
World	6,464,750	672386	10.4	28.1
More developed region	1211265	244083	20.2	38.6
Less developed region	5253484	428305	8.2	25.6

Note: All the figures of population size are in thousands

Source for Table 9: The United Nations, World Population Prospects the 2004 Revision, Volume II, Sex and Age Distribution of the World Population, Population Division the United Nations, New York, 2005, pp 20-29.

7.5 Defining Ageing in India

In ancient India, life span of one hundred years was divided into four stages: life of a student, householder, forest dweller and ascetic. There was a gradual move from personal, social to spiritual preoccupations with age.

In the traditional Indian culture, a human life span is one hundred years. Manu, the ancient law giver, in his Dharmasastra divided this span of life into four 'ashramas' or life stages. The first, 'bramhacarya' (life of a student) was to be spent at the teacher's (guru) house. This is the life of a celibate, to be spent in education and training. Once education was complete, the boy (grown into adulthood by now) would be ready to enter the 'grihasta' ashram. This was the life of a householder. A man was to marry, have children, and shoulder the responsibilities of an average citizen in the society. He was to discharge the debts he owed to the parents (pitru rina) by begetting sons and to the gods (deva rina) by performing Yajnas (rituals).

India with 1,028,610,328 people in 2001 is the second most populated country in the world. With rapidly declining birth, death and infant mortality rates and increasing expectation of life for males and females, the country is on the threshold of demographic transition with resulting dramatic changes in its age structure. These demographic changes suggest rapid ageing of the population in the future. As such it is worthwhile to have the information on the absolute and relative size of the elderly population and its demographic and socio-economic characteristics, and also its future course. All this information is required for planning and policy-making for the elderly population.

7.6 India's Elders

- Fifty years ago India's population was 350 million and the population of the elderly (above 60 years) was 19 million. Today, while India's population is 1 billion, a three-fold increase, the population of the elderly has gone up to 81 million or more than four times.

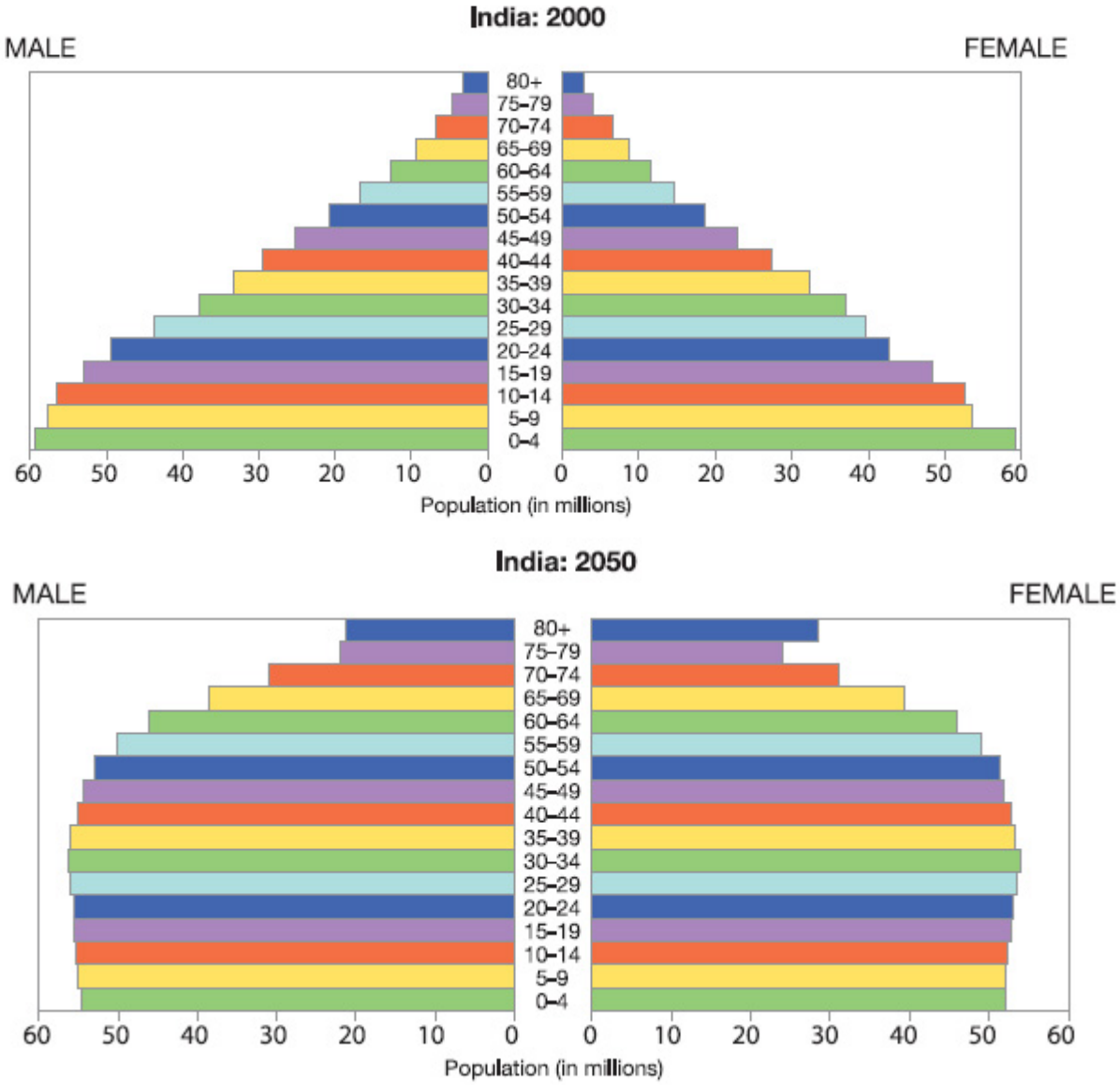
- The population of the elderly is estimated to go up to 127 million by 2025 and 324 million by 2040. In fact, it is expected that by 2050, they will constitute 25% of the total population.
- Of the 81 million, 40% live below the poverty line and another 33% just on the edge.
- ***India offers no social security for the elderly.***
- *Ninety percent come from the unorganised sector.*
- 75% live in rural areas.
- 64% are illiterate. 84% of the illiterate aged lives in rural areas.
- 54% are women. 49% of women are unmarried, widowed or separated, many of them with no support whatsoever.
- 5% of the aged population report disability - vision (52%), movement (27%), hearing (13%), mental (5%) and speech (3%).
- 90% of older persons are from the unorganised sector, with no social security at the age of 60.
- While 21% of elderly population is economically active for the age group 60-70, less than 8% continue to stay active beyond 70+.
- 30% of older persons live below the poverty line and another 33% just marginally over it.

Table 10: Indicating number of persons 60+ in India

Year	**No. Of persons 60 + (in millions)**
1901	12
1951	20
1991	57
2001	76
2013	100 (Government of India (GOI) Projections)
2030	198 (United Nations Projections)

The elderly are the fastest growing population of India. By 2050, they will constitute 25 percent of the population.

Exhibit 28: Age Pyramid



National Policy on Older Persons, Ministry of Social Justice and Empowerment Government of India, New Delhi, Page 2.

1. In a twenty five year period starting 1991 the population of 60+ will nearly double itself. The percentage of persons 60+ was 6.8 percent in 1991 and in expected to touch 21 percent by 2050 as per UN projections.
2. No. of 50+ people in India who own a car: 2,022,000; who holiday across India each year: 3,000,000.
3. No. of 50+ people in India who own a digital camera: 149,000; who own a cell phone: 3,141,000.

7.8 Statistics of Elderly Population in India

Table 11: Growth of Elderly Population (60+) by Gender, India

Year	Total Population	Males	Females
1901	12.06	5.50	6.56
1911	13.17	6.18	6.99
1921	13.48	6.48	7.00
1931	14.21	6.94	7.27
1941	18.04	8.89	9.15
1951	19.61	9.67	9.94
1961	24.71	12.36	12.35
1971	32.70	16.87	15.83
1981	43.98	22.49	21.49
1991	55.30	28.23	27.07
2001	75.93	38.22	37.71

Source: Ageing in India: Occasional Paper No.2 of 1991, Office of the Registrar General & Census Commissioner, India.

Table 12: Characteristics of Ageing Population

Variables	1950	1990	2000	2025
Dependency Ratio				
Total Population	1.22	1.10	0.94	0.75
Children	1.09	0.94	0.77	0.50
Old (60+)	0.12	0.15	0.16	0.25
Sex Ratio				
Total Population	117.46	106.98	106.40	104.40
Children	102.96	107.38	106.43	104.65
Working Group	110.12	107.67	108.15	105.98
Old	89.90	100.28	96.15	95.65
Median Age	19.95	22.31	25.03	33.65

Source: Calculations based on World Demographic Estimates and Projections, 1950-2025, United Nations, New York, 1988.

Table 13: Literacy Rates for the General and the Elderly Population (Percentages)

Year	Area	General Population		Elderly Population	
		Male	Female	Male	Female
1961	Total	34.46	12.96	29.18	4.30
	Rural	29.09	8.55	24.36	2.28
	Urban	57.49	34.51	55.89	15.82
1981	Total	46.89	24.82	34.79	7.89
	Rural	40.79	17.96	28.74	4.44
	Urban	65.83	47.82	60.03	21.82

Source: Ageing in India: Occasional Paper No.2 of 1992. Office of the Registrar General & Census Commissioner, India.

Table 14: Ageing in rural and urban areas – Percent distribution of population of India by broad age groups and place of residence, India 2001.

	Place of residence	
Age Groups	**Rural**	**Urban**
0-14	37.17	30.64
15-59	54.84	62.36
60+	**7.74**	**6.70**
Age not stated	0.25	0.29
All ages	100.00	100.00
Median age	21.98	24.38
Old dependency ratio	141	107

Source: Computed from the data on Census of India, 2001.

Table 15: Economic Dependency among the Elderly (Percentages)

Gender	Totally Dependent		Partially Dependent		Non Dependent	
	Rural	Urban	Rural	Urban	Rural	Urban
Male	32.74	37.39	16.20	16.90	51.06	45.71
Female	77.51	86.04	13.71	9.13	8.78	4.84

Source: Sarvekshna, Vol. XV, No.2, Issue No.49, October-December, 1991

Table 16: Economically Dependent Elderly and Supporting Persons

Supporting Persons	Rural Elderly		Urban Elderly	
	Male	Female	Male	Female
Spouse	7.06	11.51	6.14	11.30
Own Children	74.95	73.84	78.03	72.32
Grand Children	6.24	6.38	6.11	6.52
Others	11.78	8.27	9.72	8.86

Source: Sarvekshana, Volume XV, No.2, Issue No.49, October-December, 1991.

7.9 Learning — Can it be a Cure for Ageing?

It seems that there is a cure for ageing that no one is yet fully aware of. It's called learning. As long as you learn/have information of something new each day, you remain fresh and maintain good health. ***An idle mind is a devils workshop.***

Ageing only happens to people who lose their lust for getting better and disconnect from their natural base of curiosity. *"Every three or four years I pick a new subject. It may be Japanese art; it may be economics. Three years of study are by no means enough to master a subject but they are enough to understand it. So for more than 60 years I have kept studying one subject at a time," said Peter Drucker, the father of modern management who lived until he was 95.*

While conversing with Shimon Peres, the former Israeli prime minister and Nobel Peace Prize winner (nearly 82 years old), he was asked; "Mr. Peres, when do you read?" He replied: "When don't I read? I read when I get up in the morning, when I can during the day and every single evening. Most of my weekends are spent reading great books. Books are my constant companions." He then added with a smile: "If you are 51 years old, eat three times a day you'll be fed. But if you read three times a day you'll be wise."

The article published in DNA Sunday by Robin Sharma is author of The Greatness Guide.

7.10 Ageing Societies, Learning and ICT

As the share of older people increases, there is a need to improve their well-being and possibilities for integration in the knowledge society. In ageing societies, learning plays a key role in addressing challenges such as increasing social and health costs, re-skilling for employment and participation, and intergenerational sharing of experience and knowledge.

It is important to recognise older people as a heterogeneous group, in terms of self-confidence for learning, learning skills and interests, health and social connections, among others.

In general, older people's learning motivation is related to improving their everyday lives, to keeping themselves active, to sharing their knowledge with others and to connecting with other learners. ICT can help in providing new and flexible learning opportunities, which connect older people with each other and with younger generations. ***For older people, learning usually takes place in informal settings rather than in formal education and it is driven by their own interests and needs rather than by formal requirements***.

It is important to carefully develop both the content and conditions of the learning opportunities for older people. There is evidence that older people want to learn, but meaningful and real opportunities for this desired learning are scarce at the moment. More attention needs to be paid to developing relevant and accessible learning opportunities and more user-friendly tools adapted to older people. Supporting learner-centred opportunities and personal learning skills is becoming part of lifelong learning for everybody in the knowledge society, where older people make up one group of learners and mentors, interacting and integrating with others.

The whole role of learning is changing, together with the availability of a new wave of promising ICT applications and research is needed to determine how learning can best be supported and provided in an ageing society.

7.11 University of Third Age

The University of the Third Age is an international organisation whose aims are the education and stimulation of retired members of the community – those in the third 'age' of life. It is commonly referred to as U3A.

U3A started in France in 1973 where each group was associated with a local university. This academic model is used in many other countries, in particular in many continental European countries. By the early 1980s, the scheme reached Britain where its nature was radically changed to be more a self-help organisation. This model is also used in Australia, New Zealand, and the Dominican Republic.

In the British model it is acknowledged that retired people have a lifetime of experience and, collectively, a vast amount of knowledge. This is used to arrange a

syllabus for each subject where each meeting is normally led by a member of the group with specialist knowledge. Each U3A Group pays a capitation fee and has access to a vast range of resources including a multi-media lending library, special interest newsletters and contacts with other groups with similar interests. Summer schools are held by special interest groups. Most importantly, each Group is an absolutely autonomous entity, self-financing and self-managing. Most Groups are regional in nature. However, in 1998 the virtual U3A, U3A Online, was started to provide cognitively challenging courses for isolated older people from any country. Since then the initiative has been widened to include any person who regards themselves as being in their third age. Volunteers run the entire operation, including teaching, in cyberspace. ***There is general agreement that not only physical but intellectual activities enrich and prolong life in the later years.*** Although primarily for the retired, many U3As open their membership to any people not in full-time employment, thus becoming more inclusive and widening the age range of the membership.

Typical courses include, educationally, Art, Classical Studies, Conversation, Computers, Crafts, Debate, Drama, History, Languages, Literature, Music, Sciences, Social Sciences, Philosophy, etc. Some study groups do not have a prepared syllabus, but draw on reports of current affairs in their topic subject to prompt conversation and research. Some groups are designed to cross disciplinary boundaries, for example, combining Society, Technology and Science in a fashion not practical in more formal academic environments. U3A groups are well positioned to conduct serious research into local history and genealogy. For example, a group in Eye mouth collected and exhibited many photographs of life and work in the district over the years. Some groups aim to bridge the generation gap in the field of information technology opening up an exciting new world to many who might have been oblivious of it otherwise. Internet marketing is especially important for members in more remote locations. There are also many less-educational activities - 'Games', including bridge tuition and duplicate bridge playing groups; 'Health, Fitness & Leisure', including countryside walks, Theatre/Concert Clubs, Travel Clubs, Dance in all its forms etc.

7.12 University of Third Age – India

U3A in India was first initiated by Prof. R. N. Kapoor (Former Vice Chancellor) who is the founder chairman. The inaugural conference and launch of the Indian Association of U3A's took place at the G. B. Pant Institute for Social Science in Allahabad on the 28th and 29th of March 2008. In the course of just six months leading up to the conference, more than a dozen local U3A Groups were formed and there are many more in the process of formation.

Objectives of Indian Society of U3A

The broad long term objective guiding IAUTA is to mobilise, organise and empower elderly so as to enable them to continue learning and working for leading healthy, active, productive and self-fulfilling life in later years.

The main task of IAUTA is to bring elderly together in mutual interest and respect and to impress upon them the value of later life learning. It also plays an active part in the International work of **WORLDU3A** – http://www.worldu3a.org - through Internet exchanges with colleagues in Nepal, Australia, UK, Siberia, South Africa and many other countries. It has also participated in innovative projects such as mentoring of Indian school and college students, and online meetings and discussions via videoconferences with U3A colleagues around the world.

7.13 Researcher Views

Researchers have voiced their views on the current state of research on ageing studies. *"Most research is piece-meal, with hardly any ageing perspective in the design. Need-based studies that critically analyse the problem and suggest intervention methods are almost nonexistent."* ***– Indira Jai Prakash (1999)***

"It is apparent that many studies have drawbacks of one type or another. Psychosocial gerontology consists of data collection that use schedules, questionnaires or tests. Strict standardisations of these procedures are difficult, but nevertheless are important." ***– P. V. Ramamurti (2005)***

"A review of the studies shows that these researches appear to have been influenced to a large extent by theoretical perspectives, conceptualisation and paradigms arising

from the works of western scholars. Hardly any efforts seem to have been towards indigenisation." ***– Arun P Bali (2005)***

Solution

The socio-economic profiles of the elderly population are undergoing a change and many elderly persons want to lead an active life of fulfilment for themselves, their families and the community. This resource group of people can make valuable contributions if policies and programmes are developed for their integration into the development process.

Priority Issues: Following are some of the priority issues for research on ageing:

- In recent years, India has undergone enormous changes on account of increased urbanisation, industrialisation and globalisation. Hence surveys to assess their impact on the living conditions of the elderly are vital.
- Studies are needed on structural analysis of social networks and social support systems and care of the elderly.
- The high vulnerability of elderly women underlines the need to conduct studies on this growing segment of the population.
- The large number of rural elderly with their distinct problems makes focusing on this segment of the population very important.
- The effect of migration of young members on their ability to take care of their elderly family members needs to be examined.
- Research should focus on strengthening inter-generation bonds in order to enhance the overall quality of life.
- Studies should identify feasible and appropriate community-based support programmes such as day care and interactive centres in the neighbourhood and community. This would minimise social isolation of the elderly.
- The concept of 'life-span approach' and its links with socio-economic, psychological and health status of the elderly needs to be researched thoroughly.
- An understanding of various determinants of the status of the elderly and variations across different socio-economic settings is essential.
- The impact of major health problems like HIV/AIDS, psychiatric disorders, etc on older people needs to be assessed.

- The link between nutritional status and health status of the elderly is a growing area and research in this area needs to be carried out.
- The efficacy of primary healthcare in the context of rural elderly needs to be explored in greater detail.
- The complexity of issues associated with the definition, measurement and identification of factors contributing to elder abuse necessitate thorough research.
- Social and ecological factors in a society as large and complex as India needs to be explored to reveal diverse personal adjustments of the elderly. An assessment of varied determinants of successful ageing should assist in designing provisions congruent to their specific needs.
- The profiles of various organisations associated with care of the elderly in different geographical locations, along with an assessment of their perceived strengths and inadequacies need to be studied to initiate a network process.

Live as if you were to die tomorrow. Learn as if you were to live forever. – M K Gandhi

Methodological Approaches

Together with the high growth rate of the elderly population, there have been rapid changes not only in their profiles, but also their personal, familial, neighbourhood and societal environment. This intensifies the need to evolve alternative approaches and methodological refinements for studying issues related to ageing.

Following are some of the methodological issues that require the attention of researchers, policy makers and others involved with ageing issues:

- Ageing needs a multi and inter-disciplinary perspective. The development of social gerontology reveals that disciplines like sociology, demography, psychology, anthropology, geography, social policy and administration, as well as varied professional training like social work, nursing and clinical psychology, focus on various ageing issues. However, no single disciplinary focus gives a holistic understanding. So approaches to understand these issues from a multi and inter-disciplinary perspective need to be initiated. A combination of qualitative and quantitative approaches will also help to acquire a more comprehensive understanding.
- The elderly are a heterogeneous lot. Variations in their living situations need to be viewed vis-à-vis factors like age, gender, marital status, region, educational status

and occupational status. Considering their heterogeneity, proper stratification of the elderly is required so that meaningful conclusions are drawn based on findings emerging from studies on the elderly.

- Most studies conducted so far on the elderly in India are exploratory and descriptive. However, a proper understanding of various explanatory factors influencing living conditions of the elderly, as well as their perceptions and attitudes on various issues, require rigorous explanatory studies.
- Wide variation in levels of development and socio-economic status of people living in different geographical regions make national level studies on the elderly essential. A more realistic countrywide picture can be assessed based on such studies.
- The number of economically independent elderly with the ability to contribute to family and society is growing. Studies on various issues related to productivity of ageing, with success stories highlighted, are needed.
- Family support systems like caregivers and social networks also need to be emphasised in studies on ageing. Coverage of such support systems and social networks will help comprehensively to understand ageing issues.
- Most ageing issues are closely inter-linked with earlier stages of life. Hence, studies on perspectives like life-long development are important in understanding the elderly issues.
- Quality of life, well-being, healthy ageing, successful ageing, productive ageing and active ageing are issues of the elderly that require wider links and greater understanding. For better comprehension, there is a need to visualise these concepts and to evolve composite indices, with due coverage of the complex dimensions.
- In order to sharpen trends in the findings and draw more meaningful conclusions, data on ageing issues need to be analysed by controlling factors like gender, age, class and other relevant characteristics of the elderly.

In youth we learn; in age we understand. – Marie Von Ebner - Eschenbach

Areas for collaboration between public and private initiatives for improving the quality of life of the elderly need to be researched. Cohort studies, multi-generational studies and longitudinal studies need consideration.

Time is not measured by the passing of years but by what one does, what one feels, and what one achieves. – Jawaharlal Nehru

- Consolidation and amalgamation from multiple sources and links of databases and re-analyses of existing data are necessary. Analyses of both secondary and primary data need to be attempted, wherever necessary, which in turn will help to focus on ageing issues, both at macro and micro levels.
- Training in the field of geriatrics and gerontology for para-professionals and other medical staff needs to be framed. This necessitates adequate empirical database through research.
- Understanding various issues of the elderly within the total framework of their living conditions is important. This will be more satisfying in understanding their problems.

A holistic attempt is required in gerontological research. Our focus is needed on alternative approaches, change in methodologies, improved definitions, appropriate tools and sophisticated statistical techniques for analysing data.

"There is evidence that older people want to learn, but meaningful and real opportunities for this desired learning are scarce at the moment."

Case Study: i2010 Independent living for the Ageing Society

– European Commission

New Solutions for the Ageing Challenge

Building an inclusive society is a key pillar of i2010, the European initiative to boost Europe's digital economy and jobs. i2010 recognises that technological and socio-economic innovation present opportunities to find new responses to the ageing challenge. Innovative solutions can be envisaged which will enhance the quality of life of older people, mitigate the economic problems of an ageing population, and create economic and business opportunities in Europe. Information and Communication Technologies (ICT) offer opportunities for new user-oriented services that will allow the elderly to live more independent lives.

ICT-based products and services will allow older people to live longer at the place they like most, while ensuring their autonomy and a high quality of life. They will be assisted to carry out daily activities and, if necessary, be able to have their health and activity monitored, thus reducing the need for institutional care. ICT will enhance older people's safety and security and provide them with access to social, medical and emergency services. And ICT will allow the elderly to maintain social contacts and remain active members of society and the workforce.

Understanding the Needs of Older People

The success of new solutions in ICT for ageing will depend critically on use and acceptance by the target market: older people themselves. Research shows not everyone would automatically accept and use ICT-based products and services in their everyday life. Usability and acceptability depend on various factors: adequate design, financial resources, living circumstances, personal attitudes and experiences, and of course, the advantages and practicality of the device.

Designers and developers of technologies, products and services must rise to the challenge to give these target groups a real possibility to maintain an autonomous lifestyle and meet their personal needs.

Finding solutions to these challenges will be complex. A good starting point could be to identify user needs common to all older persons which could then be added to with more specific ones related to health and well-being. These common user needs would include aspects such as:

Safety: For example, making sure entrance doors and windows are locked/closed when leaving the house or sleeping; checking for water or gas leaks; and turning all but one light off when going to bed.

Reminder function: Older people's short-term memory is not as good as younger people, and therefore they may need support in taking medication and fulfilling household tasks.

Infotainment: Easy to understand – and easy to operate – access to information and entertainment tailored to their specific needs and interests.

User-friendly interfaces: For all sorts of systems within the home and outside, taking into account that many elderly people have impairments in vision, hearing, mobility or dexterity.

As well as this 'platform' of general user needs, there will be more specific ones related to health and well-being. These will depend very much on the nature of the disease concerned. People with diseases like dementia, Alzheimer's, diabetes, glaucoma, high blood pressure, heart disease, stroke, etc. will have different user needs according to their health problem compared to the elderly in a wheelchair, or those close to being blind or deaf.

To achieve acceptance, researchers could address these general user needs first. Once the elderly recognise the advantages the technology can offer, they will then ask for additional technology-based applications and services addressing their specific health problems. Thus, a step-by-step approach is best.

Technology for People: The Research Challenge

Experience to date shows some clear messages for researchers, industry and policy-makers on how to develop solutions which will achieve broad acceptance within the older community.

Put users centre-stage

Research should be driven by user needs not by technology. This means, for instance, that different applications and services should be able to work together – 'interoperate'. Also, solutions should be able to adapt to the needs of individual groups and to their changing needs over time. Ethical implications of proposed solutions will also need to be considered (for instance in aspects such as privacy, confidentiality and security of data).Technology is often only one part of the solution. Asking what specific technologies could do for elderly people is usually not a valid starting point.

Towards integrated social and health care

Independent living is about both social and health care. Many older people experience some form of physical or cognitive impairment, or suffer from a chronic condition. Thus, besides social care there is a clear need for long-term healthcare too. The challenge is to find the right mix of health, social and informal care to match the individual's needs: this requires 'joined-up' thinking by researchers, policy-makers and care agencies on the ground.

Respect individuals' wishes

Old people are not a homogeneous group. Like the rest of the population, there are huge differences in health, income, education and expectations within the older community. National, ethnic and gender differences also come into play. Thus, it is important to find solutions that take into account of this diversity and respect the wishes of individual older citizens.

Don't forget the Care Takers

Care Takers - both professional care takers and families - play an important part in the lives of many elderly people. This is especially the case for dementia, where the number of sufferers is growing rapidly. Technological solutions must support these care takers and families, as well as the sufferers themselves.

Needs change

Elderly people's needs and expectations evolve with time. Following an operation or period of illness, for example, elderly persons may require increased levels of care whilst they recuperate. They may then be able to resume their former lifestyle with less support from care takers. Similarly, the 'older old' (those aged 80+) tend to have different needs from those in their 60s and 70s.

Working together for innovative solutions

The problems call for a multidisciplinary approach. Informatics and engineering experts need to work closely with sociologists, psychologists and behavioural scientists to understand how to design care systems that integrate easily into the lifestyles and behaviour patterns of the end-users.

Innovation for Health, Well-being and Independent Living

We are still only in the early stages of exploring how to apply technology to the challenges of ageing and independent living. Today, technology often raises expectations that it then fails to deliver. Mobile phones, for example, are now so small and have many complicated features that many older people find them difficult to use. However, marketing a product as 'suitable for older users' is generally counter-productive. Most elderly people do not like to be seen using 'products for the old'.

The ***'Design-for-All'*** concept is an important way of ensuring that products are suitable for use by older people. It shows that good design principles bring benefits for all users of ICT systems, but recognises that with serious levels of physical or mental impairment specially adapted devices will be needed.

A Model for ICT Innovation for Ageing

Clearly, we need a new model of innovation in ICT for Ageing, one which is needs-oriented and puts users at the centre of ICT systems. New solutions are needed across all aspects of older people's lives, whether in the private sphere, the public sphere or at work (see diagram).

It is no longer a question of helping the old and frail to cope with daily life. Rather it is about enhancing quality of life by enabling older people to take part in a full range of social, economic and cultural activities. This will involve seamless integration of assistive applications with mainstream (e.g. consumer electronics) products and technology-supported care services.

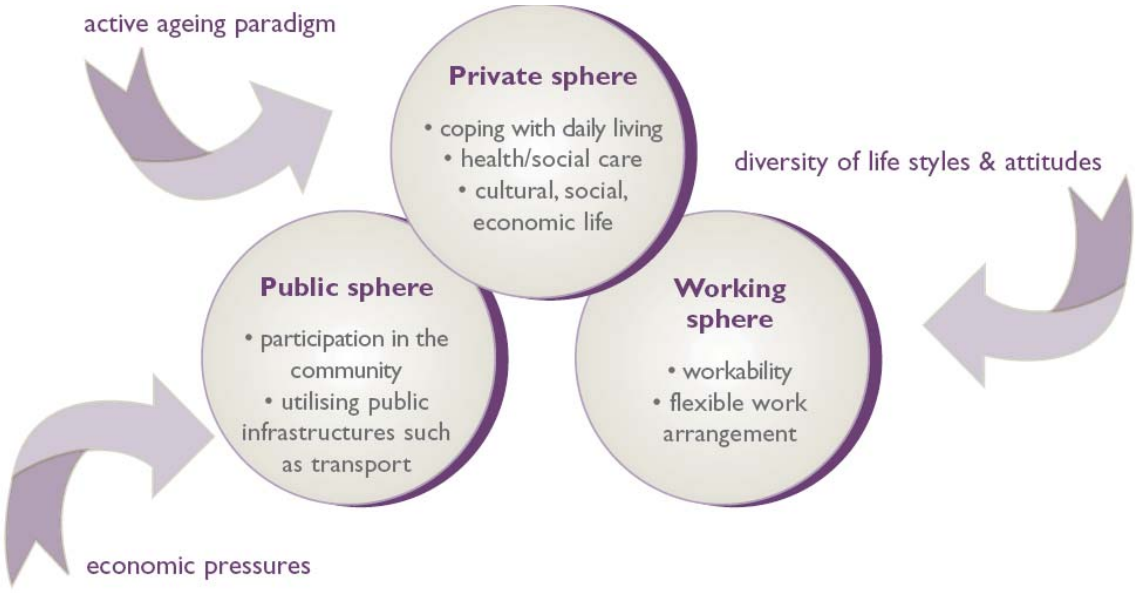


Exhibit 29: A Model for ICT Innovation for Ageing

Such an approach needs to consider basic (or enabling technology) research, applied R&D, and deployment activities.

Key technology fields include:

- Materials – polymer technologies, nano – coatings
- Micro and nanotechnologies, including sensors and biochips
- Embedded systems – as in smart textiles and home automation
- Human-machine interfaces – display technologies, natural language communication, gesture recognition
- Communication - body area and home networks
- Software, web & network technologies – e.g. tele-services

Research efforts should focus primarily on integration and on offering flexible and modular solutions that can be easily adapted to meet the specific requirements of the target group and/or the given infrastructure. User requirements should be paramount throughout, as well as localisation to match differing social patterns.