

**Technicalities of Ageing in Place:
A Case Study of the Integration of Residential Care Services
through the Use Of Information Technology (IT)
in the Changing Context of Care**

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ABSTRACT

Through a case study about the impact of IT adoption in a residential aged care organisation, this thesis examines the increasing pressure for service integration as mainstreamed through reform policies. Specifically, the research investigates the role of IT in facilitating the 1997 aged care reform agenda of ageing in place focusing on the levels of transformation from the policy context to the organisational/management context, and to the context of service provision by care staff. A single embedded case study (Yin, 1993) is used in order to meet the general objective to capture the dynamics of the impact of ageing in place in the three social contexts. The research is informed by social constructionism, a theoretical framework that emphasises the significance and effects of language in shaping social realities (Ainsworth, 2001; Hosking, 1999). The framework, therefore, justifies the qualitative analysis of both written (i.e., policy documents) and spoken (i.e., interviews with staff) texts to address meaning in relation to context.

Changing technologies can result in altered societal structures (Betz, 2003) at all levels, from the very complex to the very basic. As such, it is important to understand a few basic premises of technology. First, technology is a human invention to improve the well-being of society (Ayres, 1996). Consequently, technological inventions that improve the quality of life are seen by people as a necessity for modern living. In the case of ageing, modernisation and technological advances effectively resulted in people becoming healthier and living longer (Department of Health and Aged Care [DHAC], 2000). Second, technology is a human means to control nature (Betz, 2003). As such, technological advances can be seen as a modernising process of predicting and regulating the effects of the trends existing in the environment, such as ageing. Ageing in the twenty first century presents a challenge to government's development policies because ageing is depicted as a steady force with a long-term economic impact (Johnson, 1999). Third, a technology becomes powerful when it is sponsored by the market (Betz, 2003; Hughes, 1983). Unless a technology is backed by business, it lacks the influence on a large scale. Fourth, technology is used to enable change. By using IT, governments, business and the community are co-operating through a paradigm similar to the business sector. As a result, the service environment is shifting towards more business-like approaches. To sustain the changes brought by a different paradigm and modes of operation, the rhetoric of technology is employed. Therefore,

the purpose of the study is to investigate the use of IT in processes of organisational adaptations to reform, which requires the examination of: a) specific meaning of IT as used in long-term care policies for older people since the last structural reform, b) the rationale behind the introduction of a new IT system into a residential care organisation, and c) the meaning of IT as articulated by care staff who have experienced a change in technology.

The first paper represents a rhetorical analysis at the macro or policy level. There is a significant influence of a global political actor in developing proactive strategies on ageing, which results in a new, multi-organisational approach in delivering government-subsidised services, such as residential care. Three key institutional texts were selected to represent international to local policy development since the time ageing became a global concern. Since then, ageing is also viewed as a human rights issue. Using Burke's pentad, an analytic framework to analyse rhetoric in texts (Stillar, 1998), these institutional texts are seen to employ the rhetoric of 'technology for sustainability' to justify changes to policy approaches that seek long-term viability. Technology, in the name of sustainable development ensures support for economic growth, which balances the long-term effects of population ageing. The existence of a global force, such as population ageing, allows the intervening powers of the UN in mainstreaming ageing into development policies. Accordingly, it initiates corresponding actions at national (Australian Commonwealth Government) and state (Queensland Government) levels. IT is a medium of communication, knowledge transfer, and standard practice at these levels of actions.

The second paper represents a qualitative analysis at the meso or organisational level. This paper explores the cogent rationale in the introduction of a computer-based, care documentation system in a large residential aged care organisation. Twenty two staff, from every level of the organisation, were interviewed to get an insight into the role of IT in substantive changes to organisational structure and modes of service provision. Responses from staff indicate external and internal influence that pressured the organisation to change. In the bid to sustain the future of aged care, the industry is changing through the introduction of new structure of service delivery. The Aged Care Structural Reform instigated a shift towards sustainable service provision that is consumer-driven, with a fixed cost compliance mechanism and

performance criteria that are tied to funding. Facing the requirement for evidence to corroborate funding, a residential care organisation changed its structure of service delivery by introducing a new strategic direction. IT is part of this new strategic direction, planning, and operations of a changed service environment.

The third paper represents a qualitative analysis at the micro or individual level to examine the impact of IT at frontline service delivery. This study is also based on interviews with twenty-two staff, across the organisational structure; however, this time the focus is more on staff who are involved in providing direct care to older residents at the organisation. The reason behind this is that IT has always been a management tool which handles management priorities such as financial planning and performance monitoring. The themes arising from the interviews indicate discord at the level of service delivery from the introduction of a new technical system. It also points to the idea that staff generally refer to ethical ideas and future promise of the new system.

In summary, these three papers attached to this thesis support the notion that the meaning of technology is socially constructed. First, technology in the aged care sector has particular reference to improving or enhancing the well-being of older people, and in this case, the provision of high quality services that fulfil the needs of older people. Second, IT has an important role in meeting the evidence-based requirement, such as in the use of information in manipulating the use of resources required for the ageing population. Third, the meaning of IT is conceived from the context requiring its use such as the need to use resource efficiently to ensure long-term sustainability, which were emphasised in the last reform. Fourth, IT is used to enable structural changes in organisations to implement generic practices originated from the business sector, requiring the use of strong rhetoric such as balance and future. The limit of this case study is that these dimensions of technology can only be applied to the specific context of aged care and is not generalisable to other political contexts. However, the strength of the study rests on the macro-, meso- and micro-analysis of the meaning of technology. Therefore, future studies should investigate and compare the dimensions of technology in other contexts.

PARAGRAPH OF KEY WORDS

residential aged care, service integration, reform, Aged Care Structural Reform 1997, information technology (IT), technological advances, rhetoric of technology, rhetorical analysis, Burke's pentad, sustainability, ageing in place, policy development, organisational context, service delivery, global to local, glocal, social constructionism, qualitative analysis.

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STATEMENT OF ORIGINAL AUTHORSHIP

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

Signature.....

Date.....

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CHAPTER 1: INTRODUCTION

1.1 A DESCRIPTION OF THE SCIENTIFIC PROBLEM INVESTIGATED

Due to the ongoing acceptance and benchmarking in the practice of inter-organisational collaboration within health and human service delivery (Provan, Milward, & Isett, 2002), the context of reform in aged care policy is interesting ground for research into the use of technology. Since the last Aged Care Structural Reform in 1997, the Australian Commonwealth Government has provided a “coordinated national response” or “coordinated national framework” (Department of Health & Ageing [DoHA], 2001, pp. v, 63) introducing new legislation (The Aged Care Act 1997), reform agendas, and an accreditation system. Such strategies are intended to achieve a “sustainable care system” with a focus on the management of cost drivers and effective and efficient use of resources “across the care system” (DoHA, 2001, pp. 61-62). The shift to sustainability-oriented political structures and economic activities create a need for information technology (IT), defined as “the technology for using, creating, storing, and exchanging information in a digital format” (Waage, Shah & Girshick, 2003, p. 82). Due to the focus on technological systems that can “capture, manage and integrate a complex range of economic, ecological, and social information” (Waage, Shah & Girshick, 2003, p. 82) across aged care organisations, data transfer through the use of information and communications technology (ICT) is therefore fundamental in the reform process.

The reform context is also a site for the construction of discourses rationalising the technocentric pursuits within public policy on the one hand, and the development of alternative conceptions of change on the other (Ferneding, 2003). The reform package launched structural changes, including, among others, a casemix funding tool that requires service providers to compile comprehensive, service-related evidence in order to claim funding from the government. In addition to this cost compliance, aged care providers were also expected to meet performance criteria which were set to ensure the quality of care provided to residents. The ability to keep accurate data and to generate relevant reports would, therefore, require providers to consider a more effective documentation system. These policies also suggest a trend to rationalise aged care service provision and to integrate aged care into a ‘knowledge-based service economy’, predominantly found in post-industrial societies (Andersen & Corley, 2002).

Post-industrial societies such as Australia have benefited from a development policy that has science and technology at its core. In their paper, Juma et al. (2001) state that “[a] developed country relies on authentic competitiveness based on technology” (p. 633). The idea that technology can create competitive dominance has been called the ‘technological imperative’ (Betz, 2003; Feenberg, 1999; Winner, 1977) which is also known as ‘the push of technology’ (Eriksen, Wofford, & Peterson, 1998). Frederic Betz (2003) emphasises these influences as “the imperative in technological innovation” or “[the] superior technology of a competitor [which] cannot be ignored by other competitors, except at their peril” (p. 8). The portrayal non-compliance as a ‘death wish’ in an age of information networks represents the rhetoric of technological change, creating the ‘inevitability’ associated with technological competition.

1.1.1 The Rhetoric of Technological Change

The focus of this study is on IT and its elements which are seen to produce a rhetoric of change that is essentially techno-centric. The following chapter reviews relevant literature and illustrates the difficulties of arguing against technological change when change is portrayed as a means of ‘progress’, ‘efficiency’, ‘political renewal’, and ‘capacity building’ through a network of social relations. Due to the connotations of technological change associated with these portrayals, it is important to consider the “system of ideas” (Burke, cited in Blakesley, 2002, p. 173) regarding technology in the Australian context. The persistence of technological change is depicted in the way Australia progresses into the ‘information age’, where technology becomes the means to enable socially defined objectives, justifying changes in systems of public administrations. As a case in point, information and communications technology (ICT) is a set of technologies taking a central role in enabling the transformation of government processes, business operations, and society through the development of novel products and services (Department of Communications, Information Technology & the Arts [DCITA], 2003). From this perspective, ICT development in Australia has become pervaded with evolving information, communication and digital technologies (DCITA, 2003) and at the same time, has created complexity in policy, processes and procedures (Henman & Adler, 2003).

ICT is referred to as an enabling technology in Australia's information economy (ABS, 2002; DCITA, 2003). ICT is ubiquitous, in that its artefacts have become the conduit of human actions (through means of information) and relations (through means of communication). The pervasiveness of ICT calls for the understanding that technology, subject to construction and re-construction in society, is not only an extension of human capabilities, but also the knowledge of specific motives and the application of specific techniques to achieve political goals through the use of language and symbols. We talk about things, people, or ideas. The conception of an entity in our mind is imbued with our own values, and this complex knowledge is then organised into texts communicated through language.

Language itself is subject to certain limitations found in dialectical structures and, therefore, the institutional treatment and validation of certain discourses alongside others is applicable within certain boundaries (Neubert & Reich, 2002). Rhetoric (or the persuasive use of language) is packaged in discourses about these changing networks of power, and the use of ICT becomes the order of today's politics, economy and society. According to Blakesley (2002), the occasion for rhetoric occurs when there are probabilities instead of certainties. Since its appearance in the vocabulary of politics, 'enabling' has become part of a discourse that has grown to include possibilities such as "to empower and to provide the actual ability to choose between options, extending freedom for both providers and users of services" (Taylor, 2000, p. 372). More importantly, technology-enabled changes and the potential for ensuing empowerment provide a solution to the pressing need for the integration of different services for individual clients in the human services (Hudson, 2003; McCoy & Vila, 2002; Ott & Dicke, 2001). The modernisation of public service, for instance, represents government's commitment to its becoming a competitive player in the new information economy (DCITA, 2003; Podger, 2001). This political goal articulates the whole-of-government approach in pursuit of economic prosperity (National Office for the Information Economy [NOIE], 2002) and through marketing egalitarian status and choice in the emerging information society (Hudson, 2003; Taylor, 2000). The notion of an enabling technology not only has conferred value on autonomy and choice, but the new infrastructure of the information society has also reassigned a great deal of responsibility to the autonomous individual.

However, while it has been a research priority to understand the emerging societal model capitalising on ICT (Hudson, 2003), such research neglects the relationships between technology and social policies (Henman, 1997). As technology is regarded only as a neutral tool, there is a tendency to appreciate the familiar and useful machines more than the subtle changes they introduce.

1.1.2 Necessity as the Mother of Invention

Artefacts of information technology (IT), such as computers, are seen as neutral tools which have no ideologies except when they are used by humans. Johnson and Nissenbaum (1995) argued that the presence of computers sometimes makes no moral difference in the case of a computer replacing a typewriter. However, by having computers one is more likely to work faster and execute more functions than with a typewriter, and as such, become more critical of and more frustrated over inefficiencies. Hence, the use of a computer has changed personal commitment towards efficiency of work (Johnson & Nissenbaum, 1995).

Another perspective that counter-argues the neutral entity of technological artefacts is the social construction of technology. This perspective holds that a society is defined by its technology and vice versa. Fitzpatrick (2003) argued that “new technologies do not emerge *ex nihilo*, but are always embedded within social contexts whose contours shape the ways in which technologies are constructed and utilised” (p. 133), for example, changing work practices resulting from the use of mobile computing technology. Accordingly, to obtain a more holistic assessment of technology, structural conditions such as the social and policy environment should also be addressed (Fitzpatrick, 2003; Klein & Kleinman, 2002).

1.1.3 Technology and the Market

A technology becomes powerful when it is sponsored by the market. For instance, in the case of biotechnology, Betz (2003) has argued that a new industry has been derived from a new indispensable technology. However, the existence of market forces give rise to the idea that first, there is financial enthusiasm behind a technological innovation (Betz, 2003), and second, there are risks associated with turning research and invention into a commercial product (Branscomb & Auerswald, 2000). This means that in order to commercialise an innovation, the indispensable

aspects of the innovation must be emphasised. Landmarks of achievement refers to technological innovations that have been made relevant by powerful stakeholders in society (Bijker & Law, 1992; Hughes, 1983) and this infrastructure, in turn, shape the social order for subsequent periods in history. Hence, we have to recognise that technology is a social product and conversely, it also becomes the physical infrastructure shaping society.

1.1.4 New Game, New Rules

Technology is used to enable change. Ayres (1996), in his reference to IT, states that it is ubiquitous, fast developing and rapidly penetrating new markets compared to other new technologies. Changes in activities that are centred on technologies of information and communication are at the heart of a current revolution (Castells, 1996) and every time IT converges with an aspect of life, it is duly transformed (Jones, 1983). The technological system manufactured in the name of the improved well-being of society is nothing less than sacred. Herein lies the authority of discourse to construe what is understood by technology. Not only is the idea of improved well-being is put forward in technical innovation (Ayres, 1996), but there is also the articulation of technology as an improvement to the existing system. In a similar vein, technology is subject to the philosophy and moral values of the community it is meant to serve. The processes of deliberation and implementation of technology are driven by social institutions which use technology as their social vehicle to define social realities. It is important to observe how the social is reproduced from culture (knowledge) to means (vehicle) to outcomes (realities). Therefore, policy development replete with new technologies promises better outcomes.

1.2 THE OVERALL PURPOSE OF THE STUDY

The study is underpinned by an overarching research question: what is the meaning of technology for the aged care reform agenda of ageing in place? This research aims to critically analyse the meaning of IT in facilitating the provision of residential aged care services, in the context of recent structural reform towards ageing in place. The use of IT in this study is characterised as the use of computers, computer-related programs and networks to assist service provision. Since information and communication are vital to service provision, the concept of IT in this study extends to ICT.

1.2.1 The Specific Aims of the Study

In keeping with the central purpose of investigating the use of IT in processes of organisational adaptations to reform, the following are the specific aims of the study:

1. to examine particular references to IT in the aged care context following the political reform towards 'ageing in place,' which was implemented through consolidated residential care services.
2. to examine the logic behind the introduction of a new IT system into the management structures and processes of a residential care organisation, and
3. to examine how IT is articulated and experienced by care staff who interact directly with older residents.

In order to undertake an ecological analysis of the meaning of technology in the context of change, the social settings of the study are divided into microsystem (lived experience), mesosystem (interactions with social organisations or other microsystems) and macrosystems (broad ideologies of the culture). Blaikie (2000) outlines three sites of analysis in natural social settings: i) macro-social phenomena, ii) meso-social phenomena, and iii) micro-social phenomena. These contextual levels correspond to the first, second and third aims of the research.

An ecological approach through a single, embedded case study design (Yin, 1994) helps in the understanding of how the constructions of IT as an enabling technology in the macrosystem is reproduced, negotiated and contested in the meso- and micro-levels of aged care. This multilevel analysis employs text as a group of communicative actions within the social contexts. Data collection and analysis are based on written (documentary evidence) and spoken texts (interviews), which are woven into a single case study (Goodman, 2001). In relation to the first aim, a discourse analysis based on the analytical framework of Burke is employed to understand the rhetoric in texts. The second and third aims require an inside view from an organisation undergoing a change in structure and in modes of service delivery, particularly, as a result of the introduction of a new technology. A singular case study thus provides sufficient in-depth information about the imperatives of change and the articulation of a new technical dimension of work among the care staff.

1.3 AN ACCOUNT OF THE SCIENTIFIC PROGRESS LINKING THE SCIENTIFIC PAPERS

The first paper presented in the thesis provides the result of a macro-level analysis of institutional texts, which signify policy formation after *the UN International Year of Older Persons in 1999*. Three key documents were selected from the international, national and local levels. They are: the *Madrid International Plan of Action on Ageing (MIPAA) in 2002*, the *National Strategy for an Ageing Australia in 2001*, and *Our Shared Future: Queensland Framework on Ageing 2000-2004*. These institutional texts are analysed using Burke's analytical framework which used five interrelated elements of symbolic action (the pentad) (Stillar, 1998). Based on Burke's perspective of 'dramatism', the construction of ageing as a 'global' concern sets the stage for a coordinated, multi-sectoral approach to ageing. A standard feature of these policies is the information of the long-term effects on ageing. Long-term economic impact of ageing encodes the "kinds of 'visions' for life, people and practices" (de Alba et al., cited in Ferneding, 2003, p. 1), by reflecting the costly maintenance of current service arrangements.

In the twenty first century, ageing emerges as a challenge for developed nations like Australia. Research into the patterns of ageing and similar trends among the world's developed regions establishes the worldwide phenomenon of population ageing, a 'global' challenge which provided a mandate for the leadership of global political actors such as the United Nations (UN). Population ageing, a demographic change, resulting from a progressive decline in fertility and mortality rates, prolonged longevity, and changes in migration patterns is a 'global' reality that continues to inform the development of policy responses in individual countries. The science (*knowledge-base*) and technology (*method*) of managing demographical changes from population ageing, therefore, can be seen as the means to control its long-term impact through political reforms (*social change vehicle*). Therefore, the incorporation of technology into public policy approaches must be treated with a 'questioning' attitude and with an ecological analysis of the policy context (Ferneding, 2003).

From the ability to predict the long-term impact of demographic change, policies on ageing also contribute to rationalisation of costs for managing an ageing population.

Perhaps due to the risk of exploitation and neglect of older people in the developing world, the UN also identifies ageing as a human rights issue that should be prioritised in development policies. The sanctification of ageing encourages activism and competing views from the public domain. Within this context, technology is proposed to mitigate the long-term effects of ageing. In the name of sustainable development, technology, which fuels economic growth, was touted to benefit the ageing population. Technology for sustainability also promotes multi-organisational collaboration to 'balance' public and private resources spent on the ageing population. While IT is suggested to have a role to play in this collaborative approach, the deflected notion in the policy paradigm is that IT-based operations will be crucial in the development of 'organised delivery systems' (Wolper, 2004) which can boost competitiveness within the aged care sector. Inevitably, this collaboration is facilitated by IT and therefore, IT-enabled governance strategies, including national standards and best practice, are mainstreamed at all levels.

The meso or organisational level is investigated using qualitative analysis in the second paper. Organisational documents were used to investigate the powerful influences underlying the introduction of a clinical documentation system in a large residential aged care organisation. To supplement the documentary evidence, an inside view of the people who chart the direction for the organisation was required. Interviews with key management staff provided an insight into the role of IT in substantive changes to organisational structure and modes of service provision. Participants' responses indicate that external and internal influences were pressuring the organisation to change. Imperatives that result from the introduction of a new structure of service delivery towards evidence-based service provision were fundamental to the change. Since the last Aged Care Structural Reform, the context has shifted towards sustainable service provision. This is characterised by a service infrastructure that is driven by the market, with an integrated cost compliance mechanism and performance requirements attached to funding. The imperative for evidence to corroborate funding has pushed the residential care organisation to change its structure of service delivery. This was achieved by introducing a new strategic direction which requires IT to ensure fiscal sustainability, such as in the planning and operating of a service environment to achieve greater efficiency.

The micro or individual level is examined through a qualitative analysis of the impact of IT as perceived by aged care staff. This study, in research paper three, is based on interviews with staff members but with a higher focus on care staff, who are involved with direct service provision. Twenty two staff selected from a cross-section of an organisational structure were interviewed. They included key administration and management staff, clinical staff such as Registered Nurses and Assistants in Nursing, allied health staff such as Activities Officers and Physiotherapists, and support staff including domestics and volunteers. While IT has been dominant in the realms of management, increasing pressures for clinical information requires the care staff to document information accurately in order to generate income for the organisation. Themes emerging from the data imply that there are significant ramifications for the way care is delivered as staff adapt to a new technical dimension from an existing mode of service provision. The other two themes, namely 'balance' and 'future', indicate that there are significant distinctions between the paper-based and computer-based system which also contribute to competing discourses between the management and the care staff.

In summary, the three papers comprising this thesis support the notion that the meaning of technology is:

1. conceived as a means to integrate the vertical (global to local policies), horizontal (consolidation of service systems at a regional level), non-material (service outputs), and even virtual (electronic-based) instruments of the aged care service system,
2. related to the evidence-based requirement with regard to the use of information to predict and control the use of resources for the ageing population,
3. generated from the context which made its use necessary, for example, in using resources efficiently to maintain 'long-term sustainability' through the competitive advantage of information, and in facilitating the changes, which are seen to converge on generic practices originated from the business sector, and relied on rhetoric of 'sustainability', such as 'balance' and 'future'.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

This literature review chapter is dedicated to synthesising a selection of complex factors associated with the use of information technology (IT) in the delivery of services for older people in Australia. Section 2.1 deals with the local constructions of ageing discourse that are shaped by international experience. Demographic changes in the ageing of the population are perceived to have major implications for the country's economic development (Cooper & Hagan, 1999; Howe, 2000; Johnson, 1999). As a result, the government is looking for ways of 'sustainable' service provision that will ensure such services can be maintained and improved for the coming generations of older Australians (Department of Health & Aged Care [DHAC], 1999a). The next section (Section 2.2) highlights the processes in the wider context of aged care which provide a background to the political reform and the impending restructure of the aged care service system.

Section 2.3 deals with social constructions of IT in which IT is commonly perceived as a neutral tool which can be incorporated into everyday life to mean progress, efficiency, and an expansion of social networks for overcoming distance and geographical boundaries. These social constructions of IT provide some background to the justification for using IT in the provision of human services. Section 2.4 explores the issues of computerisation in human service organisations, pointing to the gap in the understanding of IT as a social change agent. Following the discussion in Section 2.3 and 2.4, the final section (Section 2.5) clearly articulates the problem to be investigated in this thesis.

2.1.1 Older People, Gerontological Perspectives and Public Policy

2.1.1.1. *Population data*

As a developed country, Australia has outgrown its image as a youthful nation and has begun to study the impact of population ageing leading to several reforms in the aged care service system. Due to the image of Australia as "young and free", the idea that the Australian population is ageing has been difficult to grasp until fairly recently (Andrews, 2005, p. S2). Nonetheless, the slow but steady change in the population over the next fifty years will result in a considerable increase of the number

of people above 65 years old (DoHA, 2003). Based on the population census of 2001, the proportion of older people over 65 year old category will increase over the next fifty years from 13 percent in 2001 to 24 percent in 2050 (DoHA, 2003). Added to that is increasing life expectancy which will result in the growth of the older age groups (more than 80 years of age), which will double in the next twenty years and triple in the next fifty years (DoHA, 2002; DoHA, 2003). Based on the 2001 census, it is also found that the number of centenarians is projected to grow from 2503 people to 38000 people over the next fifty years. The population data in the National Strategy for an Ageing Australia projects that a quarter of the population will be over 65 years of age in fifty years (DoHA, 2002).

Population data supports the idea of an ageing Australian society. The growing number of older people is associated with an increase in the use of healthcare services and other support services for those who progressively become 'frail' and have disabilities (Queensland Health, 1998), and as non-communicable and chronic diseases become more prevalent through increased life expectancy (World Health Organization [WHO], 2000). Since 1996, the Australian Commonwealth Government has increased funding for aged care by 100% from \$3 billion to \$6 billion (Andrews, 2005), which represents 1% of its GDP (Madge, 2000). Thus, the images of ageing and the perceived impact on the economy and society are among the factors contributing to the realities of ageing and the development of public policy.

2.1.1.2 The socially constructed realities of ageing and the development of public policy

Ageing is constructed in multiple layers of realities: the realities experienced by older individuals and the realities presented to older people by influential groups in society. In this manner, the realities of older people are not separate from the realities presented to them. This view is also consistent with Gibson's (1998), Heycox's (1997), and Hazan's (1994) accounts of the stereotypes and political actions associated with ageing. Hazan (1994) described the dimensions as the twin effects of meaning and control, whereas Gibson (1998) deliberated on the concepts of 'personal troubles' and 'public issues', which were initially used by C. Wright Mills (1959). Heycox (1997) also discussed individual ageing as experienced by older women but argued that research and policy initiatives had ignored the structural control imposed on women's

experience. To seek a balance in perspectives and responsibilities in the public arena, the realities of an ageing population continuously raise important questions about the meaning of ageing and the relationships between ageing and policy instruments that can facilitate the provision of services.

The realities of older individuals are strongly connected to the development of gerontological perspectives and policy responses to the population ageing. For individuals, ageing is described as life-long processes of biological, psychological and social role transformations that accompany chronological age (Hooyman & Kiyak, 2002). In addition, the process of ageing is explained by social gerontological perspectives such as senescence, activity, disengagement, continuity, and labelling theories (Bengtson & Schaie, 1999; Eyetsemitan & Gire, 2003). The knowledge in gerontology becomes the basis for policies and programs to encourage 'active ageing' (e.g., WHO, 2002), 'healthy ageing' (ACT Ministerial Advisory Council on Ageing, 2003; DHAC, 1999; DoHA, 2000), and 'positive ageing' (Tasmanian Department of Health and Human Services, 1999). At an aggregate level, ageing is seen as a demographic phenomenon in the changing structure of the Australian population. This demographic change is a result of a progressive decline in fertility and mortality rates, prolonged longevity, and changes in migration patterns (Drabsch, 2004; Social Policy Division, 2004).

From the awareness of population ageing, individual experiences of ageing have entered political debate to a point where it has developed into a 'problem' or a 'crisis'. According to Gibson (1998), ageing emerged as a public issue due to the growing concern of the stakeholders, who bear the responsibility of care, driving the problem into the political spotlight. Johnson (1999) argued that ageing is problematised and posed as a crisis because it has the capacity to change economic and social relationships by affecting the rate of economic growth and resource distribution. As a result, ageing is also discussed as a 'burden' on the tax-payers in a shrinking pool of workers and on the younger generation who must relinquish their share of resources in order to offset the intergenerational imbalance (Borrowski, Encel, & Ozanne, 1997). Johnson (1999) also stated that aside from demographic change, the shaping of social and economic life in the twenty-first century is largely attributed to elements such as globalisation of markets, revolution in communications, and bio-technology. However,

as opposed to the unpredictability of such elements, the trends in ageing are depicted as more 'stable' (e.g., DHAC, 1999c; Perho, 2002). For that reason, whether or not the long-term effects of ageing will materialise as projected, ageing is commonly cast in a negative light (Johnson, 1999). The increasing knowledge about ageing, the prevalence of negative attitudes towards ageing, and its economic implications places the onus on the government and service providers to demonstrate efficiency and cost-effectiveness. Issues of service delivery resulting from accountability and the increasing need for information sharing between fragmented systems of service delivery will be discussed in the following section.

2.1.2 Issues of Service Delivery in Aged Care

2.1.2.1 Levels of accountability in the delivery of residential aged care

It is argued that accountability is an inherent challenge in the aged care sector due to the many layers of governance and therefore, the reform of aged care to integrate the service system is countered with the increasing demand for evidence from the use of a flexible funding tool. Consequently, this section addresses the problems of integration in the aged care system, namely the distribution of accountability across various levels of governance. Following that, a discussion of the burden of evidence in the aged care sector in the move towards evidence-based practice is presented. In the concluding paragraph, the use of the Resident Classification Scale to address the problem of integration is examined.

The problem of integration

All levels of government, including the Commonwealth or Federal government, State and Territory government, and municipal or local government, have commitments to fund, administer, or provide services to older people in collaboration with consumers and the non-government sector (DoHA, 2002). Howe (2002) described the role of government in aged care as complex because each level of government has different obligations to policy development, funding, program administration, and service delivery. With the objective "to support healthy ageing for older Australians and quality, cost effective care for frail older people and support for their carers" (DoHA, 2003, p. 3), the Australian aged care service system comprises a myriad of services targeting the needs of older people and their carers.

The system servicing Australia's ageing population is based on and organised around residential and community care. These two sectors of aged care operate in a wider infrastructure of health delivery, income support, and housing and community services to provide an extensive range of services to older people as their needs and circumstances change (DoHA, 2002). Keating and Sheridan (2002) argued that inter-organisational coordination is made complex by the fragmented and diffused structure of the health and welfare (community-based) service delivery systems. Many services which do not fit into the 'residential' and 'community' types of aged care, do not appear in the government's accounting record (McCallum & Mundy, 2002). As a result, the breadth and depth of the aged care continuum could not be determined due to the missing pieces of evidence. An example of the incomplete evidence to indicate the performance of aged care was noted by Gibson (1998) in the first Report of Government Services produced by the Steering Committee for the Review of Commonwealth and State Service Provision in 1995¹.

The inclusion of more baseline evidence towards the development of quality indicators in the aged care sector, such as found in later reviews by Gray (2001) and Hogan (2004), would require increased collaboration and coordination between the tiers of government and service providers. Greater service coordination and collaboration between the government departments and service providers is important in the development of performance indicators in the aged care system. The need for baseline evidence and the development of performance indicators are also in line with the broader shift towards evidence-based practice.

The burden of evidence

Evidence-based practice (EBP) is gaining momentum in both planning and policy development (Picciotto, 2003). With its roots set in the evidence-based medicine movement in England, an oft-quoted definition of EBP can be traced back to David L Sackett, identified as the founder of this particular movement (Zlotnik & Galambos, 2004). Sackett et al. (1996) maintained evidence-based medicine to be:

the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of

¹ Further development in clarifying and measuring the outcomes in aged care can be found in the Review of Pricing Arrangements in Residential Aged Care (Hogan, 2004) and in Two Year Review of Aged Care Reforms (Gray, 2001).

evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research (p. 71).

An underlying assumption of evidence-based medicine is that the use of evidence results in improved patient care (Webster et al., 2003). The evidence-based medicine movement has been adopted by and adapted to numerous disciplines including general health, behavioral health, education, criminal justice, and child welfare services (Nay, 2003; Zlotnik & Galambos, 2004).

Given that the final outcome of EBP is to enable staff members to make sound decisions concerning care and to deliver better services for clients, EBP is pursued in many areas of quality assurance. Governments and health care managers readily embraced EBP in an age of benchmarking and quality improvement (Nay, 2003). However, the renaissance of empirical evidence has its critics as well as concerned parties due to possible exploitation of the concept. Zlotnik and Galambos (2004) propose that this is why there are ongoing discussions in health care on EBP. The concept of EBP itself is still under construction to fit the health care setting (Brazil, Royle, Montemuro, Blythe, & Church, 2004). One reason behind the scepticism surrounding EBP is its instigation by the medical profession through evidence-based medicine. Thus, the 'best' evidence is generally applicable to areas concerned with the effectiveness of an intervention (Nay, 2003). For instance, a randomised controlled trial is the 'gold standard' for clinical practice evidence whereas expert opinion is the lowest in the rank (Nay, 2003; Rycroft-Malone et al., 2004). Therefore, in these care settings, qualitative evidence expounding residents' needs falls outside the parameters of best evidence, and is largely ignored because it cannot be used to obtain funding or to improve care. Most of this qualitative evidence still exists in the form of raw data and is yet to be transformed into information and knowledge for improving organisational performance.

In view of the broad societal changes and emerging constraints on funding, the long-term care industry is emphasising strategy development for organisations in order to align quality management practices with performance outcomes (Potthoff, 2003). Performance reporting, therefore, is tied to funding which necessitates the maintenance of service-related data. The Aged Care Act 1997, which is the legal basis for regulating

Australia's aged care service industry, reinforces the importance of keeping accurate data. The ramifications of non-compliance, in the form of penalty points and loss of subsidies, have resulted in the need for more detailed documentation processes. Due to the recent strategic developments in the aged care industry and regulations sanctioned by the Aged Care Act, the demand for evidence-based practice is one of the most significant challenges facing the aged care sector. The introduction of the Residential Classification System (RCS) in residential aged care has been found to increase the levels of documentation to "provide evidence of care consistent with the accreditation standards" (Jeong & McMillan, 2003, p. 23). The increasing pressures for accuracy and comprehensiveness in documentation emphasise the importance of the use of IT applications to address government's requirements in order to obtain funding.

The RCS and reimbursement of care

Following the 1997 Aged Care Structural Reform, the Commonwealth no longer funds nursing homes based on a uniform rate for actual or allocated cost. Instead, the RCS has become the basis for the reimbursement system which assigns specific 'dependency' categories to residents (Jeong & McMillan, 2003). The RCS is employed in the assessment of dependency levels, designated as 'high care' (RCS categories 1 to 4) and 'low care' (RCS categories 5 to 8). The RCS is central to the aging in place reform philosophy and creates uniformity across nursing homes and hostels by using a single classification instrument. Therefore, a potential residential care provider is able to provide a broad spectrum of care through this integrated funding tool.

The RCS, as a type of casemix funding tool (Courtney, Minichiello, & Waite, 1997), requires aged care providers to generate detailed, in-house evidence in order to claim a subsidy from the Commonwealth government. Courtney and others (1997) argued that casemix funding has two main objectives which are to i) encourage and reward efficiency; and ii) monitor whether appropriate standards are met in order to demonstrate clinical effectiveness (p. 234). The use of the casemix funding tool, therefore, is an in-built cost control mechanism for the reimbursement of care.

Casemix funding is insensitive to the range of needs of older people due to the standardisation of the resources allocated for providing the services for each classification (Courtney et al., 1997), and the use of the RCS was seen to be

problematic. The standardisation and rationalisation of resources can be detrimental for the case of older people who require longer time for convalescing from an acute episode or illness and also on-going support and care from their chronic conditions or disabilities (Courtney et al., 1997; Queensland Health, 1998). A number of additional criticisms have been levelled at the classification system. The RCS is seen as “the antithesis of a funding system that generates incentives for quality health outcomes” (Australian Society for Geriatric Medicine, 2002, p. 46). The increased documentation has also triggered a backlash from the nursing community due to the arduous processes that displace valuable nursing time (Australian Nursing Federation [ANF], 2004; Jeong & McMillan, 2003). The funding tool is also held responsible for the removal of the critical provision of 24-hour nursing care for nursing home residents and the leaving of ‘care’ to the discretion of management (Angus, 2003). In addition to the requirements associated with service agreements, aged care providers are also expected to present evidence of care consistent with quality assurance, requirements which are overseen by a newly established and independent Aged Care Standards and Accreditation Agency. As indicated in the following section, the requirements in aged care may have generated an environment that is increasingly stressful and therefore, unattractive for current and future employees in the aged care sector. The use of IT in the environment may add to or reduce the stress levels currently experienced in the environments. However, as the next section demonstrates, the use of IT in the workforce would produce conflicting results due to the inherent problems in the aged care workforce.

2.1.3 Workforce Issues

Workforce issues discussed in this section are believed to affect the provision of quality services, in particular, and the overall quality of life of the residents who receive care in this work environment. The next section discusses two important issues related to the ageing sector.

2.1.3.1 The ageing workforce

The problem of an ageing workforce is a long-standing issue which is addressed in public policy and also in research (J. A. Alexander, Ramsay, & Thomson, 2004; Australian Public Service [APS] Commission, 2003; Johnson, 1999; Sheen, 2001; WHO, 2002). The APS (2003) asserts that the research into the social and economic

impact of an ageing workforce began its way in the mid 1990s and now public and private organisations are dealing with a workforce comprised of a majority of mature-aged employees, who may be less familiar with technology. More specifically, Gray (2001) also pointed out the maturing of the aged care workforce which was seen to worsen the problem of the nursing staff shortage in aged care.

2.1.3.2 The problem of workforce retention

Gray (2001) asserted that the recruitment, retention and re-entry into the aged care workforce have specific barriers which may affect the quality of care in the residential care sector. The growing shortage of nursing staff has also encouraged the development of more efficient human resource structure such as through the use of personal care assistants (Gray, 2001). The shrinking pool of younger and qualified workers means that agencies have to compete for new recruits and also provide enough incentive for existing employees to continue to participate in the workforce (APS, 2003). Therefore, IT is used to attract the younger workers who are more comfortable with technology. The growing need for IT skills would also require service providers to address the competency levels in their organisation.

Windbolt (2003) cautiously made a comment about gerontic nursing in which she asserted that “caring for the elderly, whether in acute, sub-acute, residential care or community setting, remains at the bottom of a professional hierarchy that values high profile, technology driven and exciting areas” (p. 26). She also argued that the prevailing attitude towards age and ageing as well as the inherent culture of aged care contribute to the lower profile of gerontic nursing and aged care nurses. The pervasiveness of negative stereotypes and images of ageing and aged care service provision is one of the more inherent problems at the local level, which undermines progress in the larger context of aged care. This means that the use of IT in aged care is premised on the motive of raising the profile of the aged care workforce, and complying with the changes in the aged care context towards policy and service integration. The next section constructs the landscape of aged care, specifically in the residential aged care context, through pertinent developments since the last aged care reform in 1997.

2.2 THE AGED CARE CONTEXT

Throughout history, when existing policies and practices have no longer been effective, the aged care institution has responded with innovative strategies and reform processes (Baldock & Evers, cited in Michael Fine & Stevens, 1998). Since the constitutional reform of the Aged Care Act in 1997 reconstruction and instigation of new practices has been commonplace. The introduction of the Aged Care Act and its Principles finessed existing legislations, and therefore, cemented the Commonwealth's commitment to residential aged care.

Residential aged care, which consolidates nursing homes and hostels, is funded by the Commonwealth with co-payments from recipients who need both accommodation and care. The Commonwealth governs all aspect of residential care through the Age Care Act and Principles 1997 that provide guidelines in structuring service organisation and operations. The regulatory capacity of the Commonwealth is affirmed in the Queensland Government Aged Care Strategy for residential care:

It is the Commonwealth with its legislative, policy development and funding responsibilities under the Aged Care Act and Principles 1997 that will ultimately determine the future strategic direction of residential aged care (p 2).

Since 1999, as pointed out by Nay and Garrat (2004), the emphasis on ageing has involved the development of the National Strategy of an Ageing Australia, the submission of the Intergenerational Report in the National Budget, the development of infrastructure for ageing research, the support for ageing as a funding priority, the endorsement of aged care accreditation, and the opportunity for scholarships in aged care nursing. Aged care was once the concern of selective pockets of professionals and the public. Following the introduction of the Aged Care Act, it is now an important part of the political agenda. Consequently, for it to continue to exist in its particular form, the institution of aged care is reliant upon how well it can legitimise its transformation from a healthcare institution into a relevant enterprise on the global stage.

2.2.1 Streamlining Processes at the Global Level

The mainstreaming of ageing, which is currently coordinated at the global level, is engendering the transformations of the logic of policies on ageing and rewriting protocols to achieve outcomes at many levels. Policy issues and events are

increasingly mediated by transnational non-governmental organisations (NGOs) such as the United Nations (UN) (Zurn, 2004) representing the civil society. The UN, a non-state actor, enters the scene of policy-making and provides leadership on the global level in advancing the priorities and directions in ageing². Zurn (2004) also stated that the increasing involvement of non-state actors has become common only in the last two decades. Since the assembly in Vienna in 1982, the UN shapes the global context of ageing through global policies that promote the theme 'a society for all ages'. The theme 'a society for all ages' was referred to in Sidorenko (2003) and later, Sidorenko and Walker (2004), and this thematic foundation was seen to be pivotal in determining corresponding actions at the macro or societal level, meso or organisational level, and micro or individual level. Therefore, the mainstreaming of ageing policies would include the reproduction of the theme from the global level into individual countries' policies and programs that will affect service delivery at provider level.

In implementing the Madrid International Plan of Action on Ageing (MIPAA), Sidorenko (2003) stated that the mainstreaming of ageing is directed at two levels. At the international level, the focus is on collaboration and policy integration whereas at the national level, the focus is on the inclusion of ageing and issues surrounding older people into development frameworks and strategies to eradicate poverty.

2.2.1.1 Development in an ageing world: Age-mainstreaming

The twenty year lapse between the first UN assembly in Vienna and later in Madrid witness significant transformations in society and individual lives (Sidorenko & Walker, 2004). The Vienna International Plan of Action in Ageing in 1982 (or the Vienna Plan) promotes ageing as based on the "humanitarian' needs of older people" (Sidorenko & Walker, 2004, p. 153) and social justice. The MIPAA in 2002 expanded the Vienna Plan by urging countries to include ageing in their development programs (Sidorenko, 2003; Sidorenko & Walker, 2004). Development is an important force in the modern world and, therefore, MIPAA ensures that older people are not neglected in the planning processes. Furthermore, since the International Year of Older Persons (IYOP) in 1999 through to the endorsement of the MIPAA in 2002, ageing has been conceived in a context of greater awareness of the plight and the rights of older people. For instance, during the IYOP, the United Nations (UN) increased the awareness of

² Information about global ageing is found at <http://www.globalaging.org/>

individual and population ageing, promulgated its theme of 'a society for all ages' and strengthened actions embodied in the Vienna Plan (United Nations, 1998, 1999).

2.2.1.2 Ageing in a developed world: Ageing-specific

The demographic change called population ageing is not the only challenge for developed countries. Exacerbated by the effects of modernisation and technological developments, ageing in the twenty-first century becomes a challenge to both individuals and political actors (Johnson, 1999; Sidorenko, 2003). Since the cause of ageing is understood, its long-term effects can be predicted. In addition, theories on ageing shape public understanding and are useful in policy development because they integrate knowledge, provide explanations, predict what is still unknown or unobserved, and assist in the intervention to advance human conditions (Bengtson & Schaie, 1999). The great population shift requires equally great transitions in approaches to employment, housing, health care, income support and social services (Paul & Paul, 1994). The celebration of longevity and recognition of the rights of older people in a developed world challenge policymakers to come up with evidence-based policies and programs that promote reciprocity and equity among generations. Therefore, the importance of IT applications in light of providing more flexible services is amplified in this context.

2.2.2 Challenges at the National Level

Reforms in ageing policies are consistent with the view that ageing has become a global concern and, thus, there is a need for international and local partnerships to develop proactive strategies on ageing. International cooperation, however, also means "the widespread adoption of a new policy, a new approach to the delivery of public services or a new method of program management, taking full account of the country context" (Picciotto, 2002, p. 329). In the process of international cooperation, mechanisms that facilitate this convergence (including competition, replication, distribution of best practice, trade and capital mobility) have to be mobilised (Berger & Dore, 1996). Political reform in the aged care sector illustrates the government's move toward national standards and best practice in order to be a player within the framework of global ageing.

2.2.2.1 Economic impact of population ageing

Older persons' wellbeing is determined by, among others, how favourably the economy can furnish this objective. Informed by the projections of world populations and the upcoming wave of retiring baby boomers, the Commonwealth government introduced reforms and strategic planning in aged care policy following the federal elections in 1996.

2.2.3 The Aged Care Reform 1997

The Aged Care Structural Reform in 1997 was a culmination of a series of structural changes in service delivery and funding that had been taking place for almost thirty years. When the Federal government decided to implement the Aged Care Structural Reform Package in 1997, a number of things were set out to target specific objectives. First, the adoption of the Aged Care Act and Principles ensured that the funding and administration of residential aged care were restructured into a singular system that caters to two types of residential care: high care (nursing home) and low care (hostels). The point of this reform was to contain national spending through a change in political philosophy and policy towards a user pay system (Howe, 2001). The reform was also introduced to institutionalise and implement ageing in place, which is embodied in the Age Care Act 1997. Ageing in place marks the beginning of a shift in terminology corresponding to how ageing is described and regulated in Australia, and in its broadest sense, refers to the preferred option of providing care so that older people can remain for as long as possible in their familiar surroundings and communities.

Tyack and Cuban (1995) aptly described the discourse in educational reform in the United States as a “dramatic exchange in a persistent theatre of aspiration and anxiety” (p. 42). The same could be said of the discourse of reform in residential care policy based on social and economic rationalities towards population ageing. The debates on the implications of population ageing vacillate between the aspirations of embracing a multigenerational society (Hooyman, 2005; United Nations, 1999) to the concern about a growing economic crisis (National Commission of Audit, cited in Kendig & Duckett, 2001, p. 12). While increased longevity is to be celebrated as a success of medical and technological progress, it is also, paradoxically, seen to exacerbate care provisions based on assumptions or predictions about higher dependency rates.

2.2.3.1 Micro-management of ageing and the use of IT

In light of this economic 'burden', the role of IT in aged care has a lot to do with how service delivery can be made more productive, and with replacing ineffective forerunners in the service system. IT is a part of the new infrastructure for ageing which will influence cost outcomes in aged care services while increasing access, equity, and quality in service (DHAC, 2000). It is important to note that all these outcomes relate to the efficiency and effectiveness in government service provision. The use of IT in service delivery, as such, will entail its role in defining and redefining services in new and rather different ways (Wheeler, 2002). Therefore, the role of IT is primarily economic when the object of enhancing older persons' wellbeing is governed by the cost-effectiveness of the aged care system. As the next section demonstrates, the primacy of economy in the role of IT is associated with the changing philosophy and technologies in service provision.

2.2.4 Re-organisation of Service Delivery at Provider Level

This section deals with the re-organisation of local service delivery from the changing philosophy of welfare towards user-pays.

2.2.4.1 Changing philosophy of welfare

User pays

Due to the steady increase in residential aged care costs, the Commonwealth Government has highlighted the economic impact of the ageing population, restraint funding, making the funding process more accountable, and moving towards more user-pays schemes. Fine and Chalmers (2000) referred to Martin who defined user-pays as:

the general practice of charging customers in such a way that the prices they face reflect the costs of providing the goods or services. The philosophy of user pays is not an end in itself but is held to lead to desirable consequences. It avoids (often arbitrary) cross subsidies. It also increases economic efficiency as clients face appropriate price signals rather than being encouraged to over consume some apparently 'free' services and under consume others. (p. 7)

Based on this definition, Fine and Chalmers (2000) pointed out that the term user pays does not necessarily mean the onus is put on the service users alone. Producers of

services have a responsibility to not overcharge their customers, an outcome which can be safeguarded through competition among vendors for a limited market.

Cure versus care

Gibson (1998) examined the issue of defining and evaluating performance in aged care. She outlined the development of outcome measurement in public policy starting from the social indicator movement of the 1960s through to the constraints of effectiveness and efficiency of the 1990s. An important argument that Gibson (1998) made was that performance evaluation has become a less meaningful exercise due to the associated accountability requirements that are subjected to economic indicators, the lack of appropriate outcome indicators in aged care, and the continued emphasis on outcome measurement regardless of its feasibility. Therefore, while the effort to gauge outcomes in aged care remains, the process of defining and evaluating performance would lose its value if the “[outcome indicators’] superiority over process, structure or input measures [go] largely unchallenged” (Gibson, 1998, p. 149). This problem can be further exacerbated by the stronghold of the medical profession in the health care sector and the values espoused by the medical model.

Health is a fundamental social component that has evolved to become a powerful institution in developed societies. Since health has become a global concern, the broad definition of quality of life provided by the WHO becomes a reference point in policies and services (Jamrozik, 2001). In a similar fashion, the new economy also promises quality of life for the individual, community, and nation through an economy that harnesses information (NOIE, 2002). The influence of health is illustrated in the way that quality of life in Western society is interpreted via the authority vested in the medical profession, which legitimises the existence of experts, techniques and protocols (Jamrozik, 2001). Consequently, since the well-being of individuals and society becomes the object of economic and health institutions, the determination of the policy agenda and technologies used in the health care professions and the human services is arguably controlled by the medical enterprise.

Roche Anleau’s (1999) analysis of social control posits that “medicine is displacing religion and law as the major institution of social control...dictating standards for the physical and moral relations of the individual and of the whole society” (p.199).

Since disadvantaged groups represent the majority of users of health services (Jamrozik, 2001), the authoritarian attitudes sponsored by the medical model would have traversed throughout the human services environment like aged care. It is in the best interests of those who benefit the most from power, to regulate individual and collective behaviours to achieve compliance and consequently, to dictate how society functions (Roche Anleau, 1997). For instance, even if people do take interest in their treatment, adherence to the medical model is reinforced by how the medical profession regards its patients. More specifically, although IT may encourage client interests in their own health, users are reluctant to challenge professional opinions (Henwood et al., 2003). Dixon Woods (cited in Henwood, Wyatt, Hart, & Smith, 2003) “points to a potential constraint on the patient empowerment process, where, in cases of conflict between bio-medical and ‘lay’ knowledges, for instance, ‘information for choice’ might better be replaced with the more honest ‘information for compliance’” (p. 591). The dominance of medical opinion is prevalent when, for example, information is not readily available and when literacy skills are essential to access quality online information, thus, excluding many.

Secondly, the problem of cure versus care arises when there is a lack of understanding of the type of clientele receiving aged care services (Gibson, 1998) and the use of a broad based terminology of ‘care’ (Angus, 2003). According to the Aged Care Act 1997, care is defined as “services, or accommodation and services, provided to a person whose physical, mental or social functioning is affected to such a degree that the person cannot maintain himself or herself independently” (*The Aged Care Act No. 112, 1997, Schedule 1*). The RCS tool, which does not prescribe staff/resident ratios and the desired staff qualifications or skills mix, allows service providers to reallocate funding from nursing homes to other parts of the organisation. Angus (2002) argues that when these matters are left to the discretion of management, they can remove needed resources from the nursing home.

The next section demonstrates the subtle and overt reconfigurations in the technologies of service provision as a result of the changing welfare towards user pay which “emphasised deregulation, containment of public outlays, and greater contributions to the cost of health and welfare services by those with the capacity to pay” (Howe, 2000, p. 57).

2.2.4.2 Changing technologies of service provision

The following paragraphs deal with the idea of the changing technologies in service provision through the goals of cost-containment, continuous quality improvement, and flexibility through integration.

Cost-containment

Denys Correll (cited in Kendig & Duckett, 2001), in his response to the paper by Kendig and Duckett (2001), claims that The National Commission on Audit's role in aged care policy was to politicise the concerns about long-term fiscal impact of the ageing population. He also contends that the Aged Care Act 1997 was "a direct consequence of the Commission's recommendations and was calculated to diminish both short term and long term Commonwealth fiscal exposure" (p. 90). His comments echo the prevalence of an earlier preoccupation with 'demographic alarmism' which contextualises more recent concerns about ageing (Gee, cited in Ebrahim, 2002). His sentiment is also shared by Fine and Chalmers (2000) who argued that fear of population ageing was used as the rationale for a more market-based approach to long-term care funding, inclusive of diminishing responsibility of government in financing nursing homes. In contrast, surveillance and monitoring through legislative requirements and other policy instruments for continuous quality improvement have grown.

Continuous quality improvement

In aged care, the principles of 'quality of care' are explained in section 4.1 of the Aged Care Act 1997 and can be used to determine accreditation, residential care, community care and flexible care standards. For the scope of this study, the next section will discuss the principles of 'quality of care' with regard to accreditation standards and residential care standards.

The Aged Care Act 1997 discussed the terminology in the context of mechanisms used by the government to regulate quality of care through accreditation. Section 54-2 of the Act designates Accreditation Standards as the "standards for the quality of care and quality of life for the provision of residential care on and after the accreditation day" such as: (a) care recipients' health and personal care; (b) the residents' lifestyle; (c) the safety of practices and the physical environment at the

residential facility; and (d) organisational factors in service provision including management systems, staffing and organisational development. The principles of quality of care for the residential care standards are similar in all the areas of accreditation standards except in organisational factors in service provision. This means that accreditation has greater control over organisational factors. The aim of accreditation is highlighted in the report by the Productivity Commission:

Accreditation aims to promote the quality of life and quality of care of residents of government funded aged care services. Services are assessed against 44 'Expected Outcomes' under four main standards (management systems; staffing and organisation development; resident lifestyle; and physical environment and safe systems) to ensure they have internal processes conducive to quality outcomes and continuous improvement (Productivity Commission, 2003, "Aged Care Services" 12.33)

Therefore, the accreditation process would require providers to revise their internal structures and develop mechanisms to ensure that continuous quality improvement is achieved in the organisation.

Quality of care affects the choice of preferred service by both the purchaser and the client. In the competitive funding environment of human services, the quality service provider status is crucial in securing the funds needed to finance the management and delivery of the services. Without the guarantee of service quality, many human service providers have lost the funds that sustained their existence. Their demise was caused by the inability to comply with the standards of quality, which is construed in legal, technological, political and business goals that are now converging towards competitiveness and flexibility in service provision.

Flexibility through service integration

Policy approaches dealing with the twin challenges of population ageing and technological revolution require a coordinated effort between the different tiers of government, various government agencies, the industry and other community sectors (DoHA, 2001). The aim of flexible service provision is also closely related to the goals of continuity of care in service delivery. In a literature review and information paper on

'Continuity of care for older people in Queensland', Queensland Health (1998) provided a number of definitions that were used to describe continuity of care:

- A series of *connected* patient care events or activities which happen *in different health care institutions and agencies, including the home*. Discharge planning is the vehicle which moves the patient to the proper level of care and/or facility.
- The *coordination of services* rendered to patients *in three situations*: pre-hospital, hospital and post-hospital, which prevents costly duplication of services, makes hospital readmission less probable and prevents needless complications.
- The provision of *barrier-free access* to the necessary *range of health care services* across hospital, community and other support agencies, *over any given period of time* with the level of support and care varying according to individual needs. (p. 3; emphasis added)

These definitions require adherence to the idea of a seamless health service system. The system is inundated with different locations of services, different types of care, and the variety of services provided to match the type of care and support needed by older people over time (Queensland Health, 1998). Based on these factors, seamless care seems to be a case of bridging the gap between these care settings and types of care, as well as ensuring appropriate follow-ups from one service to another.

Due to the need to establish a continuum of care and to cope with the demands of minimising hospital stay, it was suggested that the health care system be enhanced and that reforms address wider processes that include the non-institutional service environment and the use of new technology (Queensland Health, 1998). However, in a content analysis of the literature pertaining to continuity of care, Hellesø and Lorensen (2005) found that while electronic patient records provide the possibility of inter-organisational continuity of care, the reality facing patients who require post-hospitalisation services suggests that continuity of care between multiple providers is difficult to achieve. It is also argued that the transition from health sector to aged care for a patient requiring residential care is not seamless due to the different ideologies and approaches in financing and funding rules between the two systems (Kendig & Duckett, 2001). Ideally, once an individual enters a care setting, his or her information should be created and shared among service providers to ensure that care needs will be met with appropriate services. Accurate and comprehensive information is vital in facilitating this process.

Section 2.2 demonstrates the changing philosophy of welfare against the neo-liberal culture or economic rationalist political agenda of reforming the Australian economy and the shrinking of the welfare state. Saunders (2002) argued that the use of such an economic framework tends to be problematic because it fails to comprehend "the issues with which it deals, its avenues of response, its design and impact, its technicalities and judgements, its economics and sociology, its history and institutions, its programs and politics" (p. vii). Therefore, the use of IT as guided by these economic frameworks and its lack of consideration for other achievable objectives outside the goals of economy, can be detrimental for services due to the prevalence of the idea of IT as a neutral tool. The next section demonstrates the perception of IT as a neutral tool and the rhetoric that justifies the use of IT without critical reflection.

2.3 UNDERSTANDING THE IMPACT OF INFORMATION TECHNOLOGY IN AGED CARE

2.3.1 Meaning of Technology

In this study, the focus is on IT, comprising the gamut of technology now called ICT and the notions of enabling and empowering that are packaged with these new networks of power³. IT is also a fundamental means in the digital revolution, which operates on digital networks (Graham, 2001; Petre & Harrington, 1996; Sassen, 2001; Wilsdon, 2001). However, such conceptions of IT may lead us to believe that the revolution occurs only 'online' or on the networks, and 'virtually' in a digital world. ICT is so ubiquitous that its artefacts have become the conduit of human actions (through means of information) and relations (through means of communication). The subtle changes from technological artefacts, namely, computers, are achieved through the adoption of new technology as a neutral tool. This 'technology as a neutral tool' perspective has blinded some people to seeing beyond the familiar and useful machines.

The use of a computer can change our commitment to efficiency of work and it could be argued that artefacts themselves have politics. That politics can be introduced in the configuration of an artefact is shown in Langdon Winner's (1986) example of Long Island Bridge, designed by Robert Moses. As the bridge is constructed so low, no

³ It is believed that the same metaphor is used with ICT as was with electricity in Hughes' (1983) work.

buses can travel on it. This design, whether or not it has incorporated Moses' ideologies, would have ensured the exclusion of people who use public transport. This example illustrates that the separation of a technical system, comprising things, and a social system comprising people, can obscure the fact that artefacts themselves can have ideologies, regardless of whether politics are introduced in the design of things.

Changes in activities based on the technologies of information and communication are at the heart of a current revolution (Castells, 1996) and every time IT converges with an aspect of life, it is duly transformed (Jones, 1983). The Australian socio-political environment has been conducive to such innovation and technological change, with IT set to prosper over the next decade (Australian Bureau of Statistics [ABS], 2002) following the announcement by the Prime Minister, the Hon. John Howard MP, about the development of an ICT Framework for the Future in 2002 (DCITA, 2003). Therefore, Australia takes an active role in using and developing ICT supported by such infrastructures in the socio-political environment. The three aspects of the Australian socio-political context contributing to the influential discourse of technology examined here are: i) IT in the new economy, ii) IT in the information society, and iii) IT as an enabling technology. These aspects provide a convincing (and relatively uncontested) logic for the adoption of IT in Australian society.

2.3.1.1 IT in the new economy

The new economy is one that harnesses information with the prospect of enhancing the quality of life (NOIE, 2002). The term new economy is also used interchangeably with knowledge economy, modern economy (ABS, 2002) or information economy (DCITA, 2003). Lee, Markotsis and Weir (2002) argue that the knowledge-based economy is brought about by ICT that overcomes the barriers to knowledge and participation. Zappala (2000) challenges the limited concept of the term 'new economy', which at the level of popular discourse refers only to the use of ICT by businesses. Instead, he focuses on the consequences for those people who are structurally disadvantaged, whether economically or socially, and in no position to benefit from the new economic paradigm. Thus, in the new economy, technologies of information and communication become power dynamics awaiting manipulation by those who can access vital information.

2.3.1.2 IT in the information society

In Australia, economic, political and social transactions are increasingly centred on information (NOIE, 2002) and within an information society, information is a highly priced commodity. For a society to be knowledge-based, it needs an educated population (Lee et al., 2002) and the dominance of IT in the service sector results from advances in education and technology (Edgar, 2001). An information society is the requisite for the knowledge economy, which is a system in which the new economy operates. As argued by Castells (1996), information, in its general sense, has been critical in the history of all societies, whereas the term informational refers to a form of social organisation in which the sources of productivity and power lie in the ways information is generated, processed and transmitted. Due to the function of information as a resource in society, a set of technologies is required to help generate, manage and disseminate information. Therefore, the growing use of ICT has been the catalyst for transformations across economy and society (ABS, 2002; Castells, 1996; NOIE, 2002).

2.3.1.3 IT as an enabling technology

IT is an enabling technology within the context of an information society and knowledge economy (ABS, 2002, pp. 8, 18). Information becomes society's expression of itself through the use of ICTs (Castells, 1996). These technologies are embedded in an information society that upholds the values of information and therefore, provides the infrastructure for Australia's system of innovation and research and development (NOIE, 2002). The capacities of the technologies of information and communication are enabling the achievement of a wide range of national goals including security and defence, demographic change, science and innovation, and education and health (DCITA 2003, p. 5). Within these activities, there are business processes drawing on enabling technologies such as ICT that allow activities to be performed differently and better (Zappala, 2000). The role of technology expands across the economy and society, and opportunities exist for those who can develop new ICT-based products and services and for those who are competitive players in the knowledge-economy (DCITA, 2003).

The pervasiveness of these technologies in the realms of human activity also suggests that they cannot be adopted in isolation. Technology is directed at transforming the whole picture, which becomes a reason for political leaders adopting a

whole-of-government approach in exploiting these technologies. For example, the Australian framework for ICT targets the broad range of strategic priorities within society and culture along with the growth of the information economy (NOIE, 2002). In addition, these technologies also help to overcome isolation which affects some people in remote areas (Lee et al., 2002). The tyranny of distance in Australia has hampered productivity and the development of innovative and effective policies via inter-agency collaborations (Lee et al., 2002). Therefore, ICT is seen to have the capacity to overcome the barriers to effective communication and decision-making, and create global links between Australia and the world. Specific terms such as the new economy, information society, and enabling technology carry meaning that promotes the beneficial aspects of technology while displacing opposing views.

2.3.2 Rhetoric of Technology

2.3.2.1 Technology in economy: Change is the bottom line

The discourse of technology reverberates through economies that regulate human service agencies. On the economic platform, the dominant discourse of technology is about constant change under the banner of growth and efficiency. The manifesto of progress, either via technological or economic development, shares a related principle of improving human living conditions (Winner, 1994). With some success in the business environment, the dominant discourse in the human services is about 'catching up' with the developments of IT to optimise its benefits (for example, R. Hughes, 1998; Roper, 2000). Underlying the discourses of economic and political motives appears to be the need to employ technology whenever and wherever possible, which may subjugate social interests in the struggle for control.

When IT is adapted to fulfil the obligations for transparency in governance and user-centred service provision, these expectations override the daily struggle in the provision of human services. Exemplifying a potential adverse effect in undermining outcomes at the organisational level, Balloch, Pahl and McLean (1998) found that managers working in human service organisations have an alarming level of stress caused by uncertainty about the future. Indeed, the future is uncertain for human service managers due to shifts in political realities and aspects of society and culture (Edwards & Cooke, 1996; McDonald, 1999a). Reforms are also occurring at a level surpassing the ability of human service managers to adapt to these changes. These

reforms are especially stressful when they “must be absorbed while services continue to be delivered” (Weinbach, 1998, p. 287). In such situations, managers of human services arguably would allocate less time to reflect on the situation in order to keep up with the pace of reforms and also with the expectation of faster and more efficient services. If people are functioning under these conditions, it becomes questionable whether they make reflective and creative use of IT.

2.3.2.2 The discourse of growth and progress

Just as the sciences flourished during the Enlightenment of the Industrial Age, radical innovations are embraced as growth and progress. Advocates of technology also suggest that it can add to and improve what is already in place. In other words, technology can deliver ‘more’ and ‘better’. In keeping with these themes, another connotation for technological progress is that it makes possible the production of a greater volume and qualitatively superior output (Rosenberg, 1992). Applications of computer technology include the use of ICTs, which are highlighted as the ‘window of opportunity’ for voluntary organisations to restructure strategic relationships and information capabilities. Computers have become crucial organisational tools, without which the management, transfer and sharing of service data would be problematical. Therefore, once we step in the direction of this shift, it is almost absurd to go back to being ‘less’ and ‘worse’.

The rapid development of computer hardware and its applications makes a new model of computer obsolete in a very short time (Mathe & Dagi, 1996). Computer experts continuously develop new technologies that may be mistakenly viewed as necessary by eager users. As such, buyers may be tempted to purchase the most advanced and the most up-to-date applications, spending dollars beyond the required features that already do the job for them. The creation of technological solutions and the availability of these technologies for application to various aspects of modern life are tempting. We are affected by the enthusiasm of the prophets of the digital age who convince us of a better future through information technologies to the point of unblinking acceptance (Nieuwenhuizen, 1997). The idea that technology makes all and saves all consequently redefines our values. Not only does technology alter our interests, it also alters the truths of our selves and of others. Therefore, as technology becomes the

instrument of progress (Winner, 1994), culture surrenders to a form of “totalitarian technocracy” (Postman, 1992, p. 48).

2.3.2.4 The discourse of efficiency

The rapidly changing world prompts efficiency in systems allowing us to move faster. Like an answer to a prayer, manufacturers of information systems explicitly state that IT’s major strength is to allow for faster transfer and efficient management of data. In keeping with the latest management techniques, IT is introduced to increase productivity and improve services to clients. Advances in IT have been associated with “more cost effective and effective services” (Humphries & Camilleri, 2002, p. 253). Despite their countless advantages, computers are still far from being able to replace practitioners, even on routine tasks (Stewart, 1988). The human element is far more valued in the context of human services in the ways managers and practitioners prescribe appropriate services and maintain vital relationships (Aungles, 1991). These relationships, unless they are part of the organisational culture, will diminish through high demands on workers’ time in a day’s work.

The excessive demand to be efficient can be detrimental to organisations that employ IT as a quick fix to their existing management problems. In the haste to embrace new technologies, the core businesses of the organisations may be sacrificed because they do not fit in with the new efficient model. The impetus towards the use of new technologies often results in inarticulate and patchy utilisation. Information technology, as a tool for ongoing monitoring and evaluation of professional practice in the human services is not creatively used to its fullest capabilities (Murphy & Pardeck, 1988; Savaya & Waysman, 1996). The desire to automate tasks may exaggerate system mechanisation before arriving at a clear definition of the system (Barenbaum & Coleman, 1989). Simply discarding the manual technique for a more computerised approach may result in failure and staff estrangement from what they perceive as complex systems. Thus, in this case, new technologies are used for technology’s sake rather than for enhancing the delivery of services.

2.3.2.5 Technology in politics: The discourse of regeneration

Even from the political stance, change continues to be the dominant discourse, pointing to the need to restructure the system. Technology is a radical human

construction that gives rise to distinct changes in society (Warner, 2000). IT as one critical resource of management is comparatively novel in the human service context. Despite this, IT has taken an enabling role in promoting change and is also instrumental in transforming aspects of practice, like accountability (Saravanamuthu, 2002).

Amidst the replacement of bureaucratic models with new approaches to service integration, the use of IT has become the solution to improve the coordination between and within human services organisations (Fine, 1997). As new models overthrow old ones, culture finds itself in a state of crisis (Postman, 1992) in which ambiguity and anxiety are common. This may result in non-reflective adoption of IT. The question is to what extent technology is being employed just because it is new, as opposed to being able to provide something better. Poised to facilitate changes, modern computer technology becomes the saviour in the pursuit of increased comprehensiveness and effectiveness of data management. Ultimately, the rendered conclusion is that we are powerless to the interface of cultural changes that come with technology because it is not clear who or what is driving the changes (Johnson, 1998).

2.3.2.6 Technology in society: User-friendly computers and their global networks

On the social platform, technology is advertised as a user-friendly instrument that can make global connections. As a case in point, there is a renewed and expanded interaction enabled by IT, creating the perception that collaboration, self-management, and meaningful social interaction will yield advantage in future social functioning (Hakken, 2000). The user-friendliness of computer technologies is at the forefront of many technology-promoting events, including government initiatives (Henfridsson, 2000; Humphries & Camilleri, 2002; Wilson, 2001), organisational restructuring (Henfridsson, 2000; Humphries & Camilleri, 2002), and education (Petre & Harrington, 1996). In addition, unobtrusive machineries, which support independence for older people in their homes, are dubbed 'the caring computer' (Wilson, 2001). Despite the claim of the user-friendliness of IT, there are still issues of alienation and anxiety from using computers (Choi, Ligon, & Ward, 2002; Roosenboom, 1995). In addition, while making global connections, local issues within the human services, including lack of access to new technologies because of economic constraints (Corder, 2001) and the adaptation to new ideologies (Martin & Matlay, 2001), are downplayed.

As the foregoing discussion has highlighted, strong discursive constructions of IT as an enabler of progress, efficiency, regeneration, and increased social relationships, show that we should understand technology more reflectively. Technology is ubiquitous and with lack of interest, it renders transformations inconspicuous. This apathy towards everyday things appears in Winner's (1986) work as technological somnambulism. By being entrenched in the culture, the 'user-friendly' technology does not invite investigations into its own doing and undoing (Postman, 1992). Thereby, we become the somnambulists in the face of progress, and in this sleepwalking state we become ignorant consumers of technology.

2.4 TECHNOLOGY AND SERVICE DELIVERY IN EVERYDAY PRACTICE

Concurrent with the changes in the institutional focus of the aged care sector, information technologies (IT) have been introduced in organisations. IT has become the basis for introducing computers as tools of trade in management systems. Common tools of trade, namely, information technology (IT) and later, information and communications technology (ICT), are used in the context of 'efficiency' (Aungles, 1991; Saravanamuthu, 2002), 'cost-effectiveness' (Humphries & Camilleri, 2002), 'increased choice' (Dickens, 1996; Starr, 2000) and 'quality assurance' (Dickens, 1996; Elliot & Gamble, 2001). This type of technology is also discussed in terms of 'regeneration' of existing organisational structure (Aungles, 1991; Southern, 2001), 'active citizenship' (Foreman & Kos, 2001; Klecun-Dabrowska & Conford, 2000; Severs, 1999), and increased security (Henman, 2002; Henman & Adler, 2001). IT is also popularly spoken of as an instrument for collaboration and integration (Bruton, 2001; Elliot & Gamble, 2001; Rigney, 2003). Clearly, IT is not merely a tool of trade, but is now taken as an active player in public policy (Henman, 1997) which will impact on everyday practice.

The widespread incidence of innovations within the domain of human lives has recently made technology an area of interest for research. Current studies on technology in the human services are mostly from overseas, and major strands of research focus on the adaptation of IT in the work organisation (Henfridsson, 2000; Roosenboom, 1995), modes of computer utilisation (Cameron, Graham, & Sieppert, 2000; de Haas, 1995), and the impacts of IT on people and organisations (LaMendola,

Glastonbury, & Toole, 1989; Oyserman & Benbenishty, 1993; Pardeck, Longino, & Murphy, 1998). However, the progress of IT has not been matched by parallel advances in assessment of the extent to which the service delivery environment has changed with the introduction of new technologies. The impact of IT on human services is less studied in the Australian setting and most of the literature is limited to the public sector. Thus, the human services have only just begun to contemplate the overall impact of technology on practice, such as in the case study by Humphries and Camilleri (2002) on Centrelink.

The issue of the impact of computers as an aspect of technological change is the second topic explored in this research. This issue arises from the fact that technology holds various meanings for different people. Above all, the forward trajectory of social change through technology has brought computers and the human services together, followed by unanticipated and often problematical consequences. The use of computers for the sake of harnessing high technology while maintaining personalised care is a complex goal in the human services, usually with inferior outcomes.

2.4.1 Issues of Computerisation among Human Services Staff

The following section argues that the issues of importance to the human services in regard to IT are: i) gradual adoption of IT in human services, and ii) ad hoc use of IT and the possibility for conflicts in service provision. The first issue dealt with in this section is the reality of using technologies within the human services sector. Under-utilisation of technology is compounded by other related issues such as technophobia (or the fear of technology), the burden of the initial outlay to set up the infrastructure, and the need for a champion within a human service organisation to initiate and see through technological developments. The next issue discussed is the ad hoc usage of technology within the context of aged care services.

The current state of knowledge indicates that computer technology is under-utilised in the human service environment. Computer technology, as a tool for ongoing monitoring and evaluation of professional practice in the human services is not manipulated to its fullest capabilities (Murphy & Pardeck, 1988; Savaya & Waysman, 1996). A survey of managers of the human services by Corder (2001) found that

technology acquisition in both the public and nonprofit agencies is dependent upon several factors like donor commitment, managers with discretion for choosing technology alternatives, and fewer volunteers in the workforce (Corder, 2001). Features of the nonprofit sector, specifically discretion in choosing when and how to apply new technology, make technology acquisition more likely (Corder, 2001).

2.4.1.1 Gradual adoption of technology

The recent interest in the impacts of technology is also attributed to the relatively new developments of IT and the far from mature state of technology-related experiences in the human services. The under-utilisation of computer technology in the human service environment also suggests that technology has not yet matured in this milieu. Despite its potential, the integration of IT in the human services at best has been fraught with problems which include generic approaches that fail to accommodate specific features of small firms (Martin & Matlay, 2001), economic drain of technological investments (Corder, 2001), and ambiguity (Henfridsson, 2000). Regardless of these issues, the move towards the use of IT is unstoppable. The delivery of human services becomes progressively more reliant on expert systems designed to mimic and overthrow experts in the long run (Choi & Murphy, 1998). When we choose to live by something, it compels us to organise our life around it. As such, “computer technology demands that all aspects of [a] human services agency must be translated into the language of computers” (Pardeck, 1998, p. 20). Consequently, by becoming the person behind the computer, everything looks like data (Postman, 1992) and all rationality flowing from this process becomes the gold-standard for practice.

Technophobia

One critical resource of management is technology such as communication and management of information systems. On the other hand, technology is comparatively novel to the human service context. Computerisation is introduced to increase productivity and improve services to clients. Increasing use of computers also presents several social issues, among others, robotics and automation, office automation, telecommunications, electronic money systems, work, centralisation of control (Rosenberg, 1992), and the list goes on. Rosenberg (1992) argues that some of these issues are associated with fears of the machines, and are fuelled by a distortion of reality by the media. Not only that, the introduction of new technologies is often followed

by unanticipated consequences (LaMendola et al., 1989). Nevertheless, Murphy and Pardeck (1988) state that practitioners' jobs will increasingly become more alienating if they allow the binary logic of computers to structure the reasoning in their practice. Thus, the benefits and costs of technology, both real and imagined, should be explored further with research to determine the potential and boundaries of its use.

Technophobia may not be the only reason why service staff become aversive to technology. More often than not, the introduction of a new system takes place alongside other changes from outside and within the organisation. Since the devolution of service provision separating the purchaser (government) and service providers, the rate at which change is introduced has overwhelmed the not-for-profit agencies. The centrality of management in the human services increases as individual, family, or cooperative charitable proprietors are incorporated. Since the practice of contracting out services, the intrusion of market values has meant that human service managers have to define new sets of managerial roles and reform existing ways of running the organisation (Edwards & Cooke, 1996; Harris, 1998). Thus, reforms are especially stressful when they "must be absorbed while services continue to be delivered" (Weinbach, 1998, p. 287). Conflict arises when the theories and practices are borrowed from a business environment that is not similar to the not-for-profit context. Therefore, the findings of Balloch et al. (1998), recognising different levels of stress on managers, are supported. The next section deals with one of the managerial requirements in the human services sector, namely managing the cost of running the organisation with reduced resources from the government.

Cost

LaMendola et al. (1989) agree that incorporation of new technologies in the human services prompts changes in the ways the profession makes future investments, performs tasks, and solves the problems of the individuals they support. Alexander (2000) highlights organisational adaptation theories in her article on the adaptive strategies of the nonprofit sector. With this perspective, she contends that adaptation in the voluntary sector follows a complex path due to the embodiment of elements of both the public and private sectors (J. Alexander, 2000). Moreover, Ryan (1997) observed that community sector organisations in Queensland are predominantly small, with budgets only at or below \$110,000. Paton and Cornforth (1992) believed that this

feature also persists across voluntary organisations in general. Cutbacks in welfare spending also advocated for flatter management structure. Hence, managers of human service organisations have to function and be responsible for work across all levels of management (Paton & Cornforth, 1992).

2.4.1.2 Ad hoc use of technology and possible conflicts in service provision

Conflict between management and direct service staff

The philanthropic model of social services is challenged with the introduction of the 'bottom line'. In some ways, managerialism may have transformed the human service arena, but the altruistic value that is inherent to social services remains in the mindset of staff and the general public. Funding agencies are often accused of creating excessive demands on not-for-profit organisations so that they tend to lose sight of public needs. However, since continuity of funding is tied to results, community organisations would have to shift their focus from output to input. Increased management costs for performance without additional funding present managers with a moral dilemma.

In line with the perception that the human services are cut differently from their business counterparts, there also seem to be different values informing the sector. In contrast to 'humanness', or the appreciation and stimulation of the human experience as a critical aim in the human services (LaMendola et al., 1989), technology is seen as a disruptive force to this objective. Underlying this argument is the idea that computerisation is not merely a matter of hardware and software applications, but also involves a conceptual process with values attached (Murphy & Pardeck, 1988). To this end, Murphy and Pardeck (1988) advocate for the use of computers within a reflective framework of adopting innovative technologies while maintaining the core activities of human services. Under this framework, the human component takes priority.

Murphy and Pardeck (1988) also believe that technical issues and social domains, which coexist in the human services, should be treated separately if computers are to improve delivery of services. The incongruent nature of these issues will result in one obscuring the other. In the first instance, practitioners must guard against blindly absorbing the conceptual neatness and the value-free decision-making associated with computers and their activities (Murphy & Pardeck, 1988). On the other

hand, technical competency, which allows further enhancement of client care, like data management and programmed interview protocols should be recognised. This means that the application of technology in practice should be implemented after a holistic analysis of computer use (Murphy & Pardeck, 1988). This issue is further highlighted in the participatory nature within the voluntary sector. In a study by Ellis (1999), the participatory design process of developing and implementing an intranet-based information system shared by co-located agencies providing services for older people was found to be fruitful and has evolved to encompass both service providers and the older adults at the agencies.

However, the chances of this participatory process occurring diminish when a focus on operational and administrative efficiency centralises power rather than dispersing it to workers. If managers feel empowered through having access to technological and other resources at the cost of professional and discretionary autonomy (Tanner, 1998), why would they want to hand what power they have to others when it diminishes their own? Therefore, having expertise in technological usage cannot only qualify individuals to have power over others but also incurs detrimental outcomes when that knowledge is not communicated. Research on nursing environments by Mok and Au-Yeung (2002) shows the relationship between psychological empowerment and establishing organisational environments. The authors reveal the main influences on nurses feeling empowered were good leadership and teamwork. This is confirmed by Cole's (1998) findings in that empowerment of employees by managers is achieved through teamwork and leadership. Such an environment then reflects employees' responsibility and accountability that are appropriate to their level of training. Studies cited by Cole (1998) refer to the satisfaction employees receive when these factors provide involvement in the decision-making processes of the organisation. Human relationships and the feeling of ownership can dictate how technology is used in services.

Tanner (1998) states that quality care management is damaged by processes and procedures required for implementing legislation and policies. Tanner (1998) further contends that the changes in case management methodology may extend managerial power but conversely decreases professional independence and discretion. The implications from Tanner's analysis (1998) show contention within organisational

operations effectively leading to centralising power bases rather than dispersing them to empower employees. Tanner (1998) addresses the tensions created between the values of social work and the shift towards managerialism. The drive towards an administrative task-centred model for practice demoralises the management of care as workers feel disempowered. In other words, workers' values and respect for those values become alienated by policy agendas and technological applications which dominate organisational outputs and in doing so create an environment that isolates workers from their ethical values.

Conflict of interest: Collaboration versus competition

The availability of technologies to enhance service provision by providing expediency and efficiency to target effective case management is not necessarily used productively for the clients. For instance, the restrictive effects of the competitive funding environment undermine the possible benefits of networking and cooperation (Hudson, 1995), such as interpersonal forums that improve communication (Healey, 1998). Establishing a competitive edge for resources between agencies inhibits communication and thus, the possibilities of service improvement through new technologies are still reliant on human actions, specifically, conveying necessary information.

The need for coordinated IT sharing between organisations highlights the influence of the competitive funding environments. Poor infrastructure shows the policy objectives do not necessarily create a healthy organisation or empowering work practices when IT does not reach the user. Moreover, the lack of training and education for providers and users indicates how resources to generate better outcomes are easily discarded especially when the costs are prohibitive and when people are technophobic (Wolstenholme & Stanzel, 2003). These issues, combined with the challenge of sharing power, participation and choice for the consumer would apparently be impossible to implement. This is significant when growing bodies of research show requirements for facilitating services are influenced by how valued workers feel in work environments (Clarke, 2001; Lovemore & Dann, 2002). Investigation is needed into why policy constructs use of technologies as a method of control when it creates a tension between workers' values and service provision, effectively breaching the mission and vision-laden statements of empowerment for the human services user.

A review of technology information and access for people with a disability by Wolstenholme and Stanzel (2003) uncovers the outcomes of the current human services environments, practices and provisions. The authors reveal that, on the one hand, the opportunity for IT to empower the consumer has risen with the advent of technological usage. On the other hand, barriers for the consumer still exist. Namely, improper assessment of clients' needs by local council and mainstream organisations emphasises the influence of the medical model because it fails to include psychosocial influences on a person's functioning. The medical model, which applies scientific methods on health, views patients' needs for treatment as a disease to be cured. This model focuses on optimal functioning of an individual and allows limited choice for the patient and the family (Reiter, 2000). In this context, IT is used to propagate a methodology of control by making work processes more complex and ignoring the importance of interpersonal communications.

For example, issues raised by Henman and Adler (2001) are defined by authors Hsiao and Ormerod (1998), who state that applying IT use to structure organisational environments for resource allocation and cost effectiveness, emphasises changes in social relationships on internal and external organisational environments. The consequences of these changes have increased operational efficiency and cost-effective applications of resources, but have taken away power from workers when such reform continues to alienate organisational structures and strategies (Hsiao & Ormerod, 1998).

Henman and Adler's (2001), and later Henman's (2002) reviews on technology in social welfare policy and outcomes argue that the use of technology assists the fragmentation of society through the application of technology to support government risk management agendas and, thus, creating conditions to enable monitoring and surveying (Henman, 2002; Henman & Adler, 2001).

The increasing complexity of processes

Lack of monitoring systems for collecting and utilising data is prevalent in the non-profit sector (McDonald, 1999b). Liker, Carol and Haddad (1999) claim that the capabilities of technology are limitless and can both simplify and complicate a task in our

everyday life. Besides the lack of predictable knowledge, such as the right way of dealing with a client's situation (Weinbach, 1998), human services also means engaging in unmeasurable service activities and outputs. Managerial practices push for quality and productivity based on measurable activities. Managers' needs for information in reporting, evaluating and planning put them in a pressing situation. Modern computer technology seems to have the answer to increased comprehensiveness and effectiveness of data management, thus reinforcing the attractiveness of technological applications without forethought.

The literature review supports the significance of changing social and technological practices that will require "subtle and powerful reconfigurations" (Graham, 2001, p. 405). It is believed that the use of IT is, therefore, crucial to the latest reform agenda in aged care towards ageing in place, a flexible service configuration which requires structural transformations in the aged care system. Derived from the literature review, the research question to be investigated in this thesis is how the transformations at the policy level influences the way aged care services are provided.

2.5 CONCLUSION

This chapter has synthesised the contextual factors shaping the use of IT in the aged care sector that leads to the idea of changing policies and practices at global, national, and local levels to accommodate new technologies in service provision. The literature review demonstrates the gap in our understanding of technology, which could result in fragmented views in the process of technological integration into the existing service context. The social constructionist approach delineates that while the discourse in aged care flows from the individual, the production is governed by rules, and therefore, sanctions particular identities and preferences in the aged care context (Checkel, 1999). Therefore, the significance of this study is in its analysis of multiple levels of discourse production in the context of aged care, which contributes to the idea of 'coordinated actions' or the integration of policy and practice through the reform process. The next section outlines the method of investigation which is used in this research.

CHAPTER 3: METHODOLOGY

3.1 INTRODUCTION

The purpose of this study is to revisit the assumptions underlying the reform of aged care policy towards ageing in place and to re-conceptualise the reform framework from the standpoint of technological change within the aged care context. The foregoing chapter on the review of the literature (Chapter 2) presented the combination of three inter-dependent issues namely, technology, human services, and aged care reform. Despite of the possibilities for various interpretations of technology within different fields of practice, discourses emanating from the changing field of human services and aged care unanimously promote the innovative approach of sustainable service delivery systems aided by the power of technology. Chapter 2 also provided a contextual understanding of the aged care policy environment contoured by related issues justifying the introduction of ageing in place as a key reform agenda. As such, from the standpoint of ageing in place as a broad technological reconstruction of the field of aged care, the study begins with the main research question: **What is the meaning of technology for the aged care reform agenda of ageing in place?** Technological reconstructions, in their broadest sense, correspond to observable technological changes in the aged care context, in which technology is seen as incorporating “a complex interrelationship of characteristics that include machinery, equipment, tools, utensils, automata, apparatus, structures, people, organisations, science, culture, systems, gender, values and politics” (Barnard & Heron, 2001, p. 215).

Due to the multi-level analyses of the natural social settings: the macro-, the meso-, and the micro-social phenomena (Blaikie, 2000), the main research question is consequently broken down into three sub-questions. They are:

- i) What are the references to IT against the contextual background of reform in aged care policy? [political dimensions of technological change]
- ii) In what ways does the policy reform process propel the use of IT at an organisational level? [organisational meanings of technological change]
- iii) What are the meanings of IT with regard to its impact on the provision of services? [individual perceptions of technological change]

Since this research is premised on the interpretive paradigm (Holliday, 2002), it aims to explore the significance of ageing in place as constructed in the policy context and how

the innovative philosophy of care is used to warrant particular notions and practices within the aged care context. Therefore, the primary objective of this chapter is to justify the research design for answering the research questions. The following table sums up the forthcoming sections which will address elements of the research design.

Table 1: A summary of the research design and chapter organisation

3.2 Epistemological Foundation (Interpretive) & Theoretical Underpinnings	<ul style="list-style-type: none"> • Social constructionism, from which related concepts such as consensual pluralism (Gergen, 2001; White, 1994), consensual meaning (Barret, Thomas, & Hocevar, 1995), consensus construction (Guba & Lincoln, 2004), and competitive cooperation (Burke, cited in Blakesley, 2002, p. 17) are developed. • Symbolic interactionism, relativism
3.3 Research Strategy	<ul style="list-style-type: none"> • Inductive and 'abductive' (Blaikie, 2000), idiographic or contextual interpretations (Denzin, 2004, p. 460).
3.4 Research Method	<ul style="list-style-type: none"> • Single, embedded case study (Yin, 2003).
3.5 Source of Data	<ul style="list-style-type: none"> • Based on Blaikie's (2000) discussion of stratified representation of natural social settings, this study is divided into three levels of analysis: policy context, organisational context, and individual context.
3.6 Method of Data Collection	<ul style="list-style-type: none"> • <u>Policy context</u>: Three key policy documents signifying global to local policy development; • <u>Organisational context</u>: Organisational documents and the use of evidence from interviews with management staff; • <u>Individual context</u>: In-depth interviews with management and direct care staff of an aged care organisation.
3.7 Data Analysis	<ul style="list-style-type: none"> • <u>Policy context</u>: Rhetorical analysis of discourse based on Burke's perspective of dramatism, using the pentad and ratios; • <u>Organisational and individual contexts</u>: Analysis of themes based on the analytical strategy developed by Strauss and Corbin (cited in Rice & Ezzy, 1999).
3.8 Validity and Trustworthiness	
3.9 Ethical Implications of the Research	

3.2 EPISTEMOLOGICAL FOUNDATION & THEORETICAL UNDERPINNINGS

3.2.1 Social Constructionism

This research follows an interpretive framework based on the epistemology of social constructionism. First, it is important to understand what constructionism is. A useful definition of constructionism is offered by Crotty (2003), stating that “all knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context” (p. 42). Underlining the perspective of constructionism is the assumption that reality and meaning are not only subjective, but are also based on participants’ construction of reality as they interact with their social environment (Hill Bailey, 1997). It means that we can construct many different interpretations of what otherwise would be meaningless objects in the world. These interpretations may also have different connotations in different social contexts and different outcomes based on our ideologies or political interest, which are socially defined. Therefore, constructionism signifies a major departure from the objective stance of positivism (Crotty, 2003) and turns towards relativism, which posits that there is no reality outside relational experience or social means (Gergen, 1999).

The idea that “knowledge is relative” is the foundation of qualitative research (Hill Bailey, 1997, p. 18). Relativism is a perspective derived from the traditions of symbolic interactionism (Newman, 2002), which shares a concern for the symbolic meanings human draw from their interactions and assumes that meanings are generated from such shared interactions (Harding, 2003). As such, a relativist would perceive that:

complex societies consist of different groups with different values and interests. Sometimes these groups agree and cooperate to achieve a common goal, as when all segments of society join together to fight a foreign enemy. But more often than not there is conflict and struggle amongst groups to realize their own interests and goals (Newman, 2002, pp. 164-165).

The ontology of relativism suggests that ‘knowledge’ is discovered interactively between the researcher and the researched (epistemology) and, therefore, uncovers ‘meaning’ through analysing descriptions or discourse (methodology) (Hill Bailey, 1997, p. 18). In

the same manner, social constructionism stresses “the hold our culture has on us [and how] it shapes the way in which we see things...and gives us a quite definitive view of the world” (Crotty, 2003, p. 58). Therefore, using social constructionism as the framework for the research fits with the overall goal of the variety of approaches and methods of qualitative research, which is geared towards ‘interpreting’ or ‘reconstructing’ subjective meanings (Hill Bailey, 1997).

Social constructionism is a different way of articulating the self and the world; in other words, it entails a different epistemological basis from other social science methodologies (Gergen, 1999; Gill, 2000). While social constructionism is also referred to as constructivism or constructionism (Gill, 2000), some authors like Gergen (1999) and Papert (1993) tend to have different deliberations of reality construction and therefore, distinguish constructivism from constructionism. Constructionism is somewhat distinct or can be seen differently from constructivism as the latter recognises the capacity of individual consciousness for constructing reality (Crotty, 2003); hence, constructionism is a social concept. Nevertheless, these perspectives share key features which include: taking a critical stance towards taken-for-granted knowledge and how reality is constructed, understanding that we employ historical, cultural and relative meanings to make sense of the world, endorsing that knowledge is socially constructed through social processes, and exploring the ways in which knowledge is related to actions (Gill, 2000).

Like any other approaches, social constructionism also has its strengths and weaknesses. Due to a lack of definition and disagreement between its practitioners (Harding, 2003), social constructionism invites a foray into debates of the philosophy and utility of the perspective, especially from those who argued that social construction is ‘done to death’. For example, Ian Hacking (2000) who wrote the book ‘The Social Construction of What?’ believes that the phrase ‘social construction’ is “obscure and overused” (p. vii). Disillusioned by the whole trend towards constructing everything predicated on ‘the social construction of X’, Hacking (2000) argued that “[o]ne of the reasons that social construction theses are so hard to nail down is that, in the phrase ‘the social construction of X,’ the X may implicitly refer to entities of different types, and the social construction may in part involve interaction between entities of the different

types” (p. 27). Therefore, X can be ‘allusions’ to many concepts such that people tend to confuse the object with the idea of their argument (Hacking, 2000, pp. 28-29).

In sociology, the social construction of technology is adopted as a way of seeing IT in social organisations. The sociological view of technology, proposed by Trevor Pinch and Wiebe Bijker (1987), is employed as a perspective to argue against technological determinism. The deterministic perspective views technology as autonomous and as a prerequisite or a necessary condition for development and the transformation of social organisation (Wajcman, 2002; Winner, 1977). Determinist perspectives also hold technology as an instrument of control by the ruling elites who determine the uses, limits, and applications of technology (Feenberg, 1995). Conversely, a constructivist view of technology emphasises the concept of ‘technological frame’ as “a hinge between the social impact and the social shaping perspectives of technology” (Bijker & Law, 1992, p. 98). The social shaping of technology precludes the treatment of technology as a neutral ‘black box’; instead it should be opened to unravel the embedded socio-economic patterns, the processes of innovations, and the complex interactions between technical alternatives and social configurations (Mitev, 2000).

Due to the gap between engineering and humanities on the philosophical bases of IT, studies on IT have been polarised into these extremes. It could be inferred that, although a simplistic differentiation, while one component addressed the technical issues, the other emphasised the social issues of IT (Mitcham, 1994). The sociological and linguistic perspectives help to construct a description of social experience through “a mixture of social science language and the language of everyday life” (Chapoulie, cited in Hamel, Dufour, & Fortin, 1993, p. 33). The linguistic turn has allowed for an interdisciplinary analysis of the changes that come with IT (Heracleous & Barret, 2001). Nevertheless, there is no holistic perspective to address the global reach, as well as local development, of IT in its context. In addition, since these studies are based on positivist or critical realist’ approaches, they have been largely quantitative in measuring the impacts of IT.

The various frames of reference of technology are also seen as a product of distributed discourses which in turn shape the various meanings of technology. Our

views of technology are mediated by the surrounding discourses in the media, politics and academia, privileging people who have mastery over the language. Langdon Winner (1986; 1994), an analyst of modern technological change, was concerned that technological artefacts had become institutionalised. In these social institutions, technology is articulated as a resource of power with advantages following its adoption. As a result, our images of the word technology and its products are produced in tandem with these dominant discourses as studies have found the commonness of technological jargon in public discourse (Galvin, 1995; Lee & Davis, 1999). Conversely, the resulting artefacts from the digital make up of IT do not emerge as something that we build through language and which in turn, shapes the language we use to refer to IT.

In organisational studies, Heracleous and Barret (2001) outline four streams of discourse in organisational research: functional, interpretive, critical, and structurational. A summary of the interpretive approach is outlined in the following table.

Table 2: Discourse and change in organisational research
(adapted from Heracleous & Barret, 2001, p. 756)

Approach	Discourse Seen As	Relation with the Subject	Guiding Motivation of Approach	Dominant Theory of Change
Interpretive	Communicative action, which is constructive of social and organisational reality.	Subject's social reality is constructed through language as a symbolic medium.	To gain an in-depth understanding of the role of language in meaning construction processes.	No strong connection to an ideal-type theory of social change. Descriptive orientation.

Following Heracleous and Barret's (2001) approach, this research builds on the epistemology of interpretive research to explore frames of meaning, and employs a critical analysis of how meanings are reproduced, negotiated and challenged in deeper, discursive structures. The analysis of the meaning of IT through the interpretive stream can be understood from the social actor's standpoint and also from the context in which discourse operates to facilitate change. Thus, to use the words of Monkman and Baird (2002), this research aims to "construct a more authentic picture of how policies are being implemented on the ground and in the trenches" (p. 507) by tracing the logic behind the changing of practices towards using IT.

3.3 RESEARCH STRATEGY

3.3.1 Inductive

Inductive strategies are employed for this study since inductive logic is practical in resolving 'what' questions (Blaikie, 2000). As stated by Blaikie (2000), inductive research strategy begins with data collection and aims to "determine the nature of the regularities, or networks of regularities, in social life," based on inductive logic (p. 25). This means that analytical categories are not defined prior to the analysis and it is expected that they will gradually emerge from the data throughout the stages of data analysis (Pope, Ziebland, & Mays, 2000). Therefore, inductive research is useful for the purpose of theory building rather than theory testing (Blaikie, 2000; Neuman, 1991).

3.3.2 Abductive

Another form of explanation, the abduction, is also an approach to social inquiry by the critical realists (Wad, 2001). The use of abductive reasoning is also crucial in this research to counter the problems of the complexities of a social phenomenon. Abduction is sometimes described as being inductive, except that it aims to create social scientific explanations from social actors' accounts (Blaikie, 2000). In addition, language is the focus of analysis because the reality of social actors and the ways they are interpreted and practised are embedded in their linguistic capabilities (Blaikie, 2000). The use of interview data of aged care personnel in selected cases will render a more practical knowledge about the use of IT by examining the meanings and processes contributing to the concept of IT as an enabling technology.

3.4 RESEARCH METHOD

3.4.1 Justification for the Case Study Method

The literature review demonstrates that the shift in the philosophy and technologies of care towards "ageing in place" requires investments in technology to enable long-term care residents to stay in the same environment while receiving services that correspond to their needs. Technology in this context is geared to enable the integration of multiple governance systems and a range of suppliers towards flexibility in service provision; it means bringing together much-needed services for older people, rather than having them going from one care environment to another. In the human services, management has to deal with various domains of accountability, which present them with higher demands for quality evidence. However, the discussion

of technology amounts to the fact that technology is not neutral and, depending on the quality of deliberation and application of a technical system, technologies can enable or disable. The literature review also indicates the issues of computerisation in human services which can compromise staff participation, and consequently affect the realisation of the benefit of using technology for the residents. Therefore, the use of the case study should accommodate the investigations of meanings of IT in the policy context in terms of reforms in aged care and the subsequent reconfigurations at the organisational and individual levels of service delivery.

The emphasis on the meaning people attribute to their social life is the concern of qualitative approaches (Blaikie, 2000; Phillips & Hardy, 2002). Qualitative research lends itself to a more in-depth understanding and to exploration of a social phenomenon *in situ*. Qualitative research normally involves an extended period of involvement with the social world and gathers the richness of social experience through data collection techniques such as in-depth, open-ended interviews, direct observation, and written documents (Blaikie, 2000; Labuschagne, 2003; Yin, 1994). The term qualitative itself suggests the stress on rigorous examinations of processes and meanings which are not measured in quantity, amount or frequency (Labuschagne, 2003). Instead, it commits itself to viewing the social world from the perspective of research participants. Through this type of research, the researcher will be able to discover people's reality and the frames of meaning that guide their actions (Blaikie, 2000). By adopting this style of research, the researcher accepts that there are multiple realities in any given social context and that people have different ways of interpreting, depending on how they construct their realities (Blaikie, 2000). The interpretive framework justifies the use of qualitative primary data, which according to Blaikie can be derived from the macro or policy context, the meso or organisational context, and the micro or individual context. The use of a single, embedded case study is therefore appropriate to capture the multiple units of analysis.

Sociology and literary theories capture the context and language to describe the social experience and, thus, contribute to conceptualisation of research questions, the development of the research framework, and formulation of the research design to investigate the meanings of IT at different socio-organisational levels. The case study is selected as a method due to the complex mix of regularities underlying the experience

(Downhard, Finch, & Ramsay, 2002) and because the phenomenon observed is deeply embedded and is not distinguishable from its context (Yin, 1993). The different levels of observation used in the case study as a composite of a particular experience will help to exemplify, substantiate, or challenge the theories used in the research. Therefore, the view of language as constructive, rather than instrumental, is employed in the research framework of discourse as social construction as a way to make sense of the frames of meaning social actors use in their scheme of interpretation. The next section describes the three levels of investigations utilised in this study.

3.5 SOURCE OF DATA

In order to answer the research questions, qualitative, primary data will be used from two sources. The first part will examine the texts of relevant policy documents. The second part will derive the primary data from individuals in semi-natural settings. These data are necessary to understand the translation of these policy documents into aspects of practice, particularly in regard to the use of IT in residential aged care facilities. Concurrent analysis of policy documents with the data gathered from in-depth interviews will be undertaken to allow the data to inform cumulative findings. Simultaneous assessment of the data from discourse analysis and also from interviews can be used to reflect on the hypothetical model that underpins this research.

3.5.1 Three Levels of Analysis

Blaikie (2000) classifies the natural social settings into three sites for analysis, namely the micro-social phenomena, meso-social phenomena, and macro-social phenomena. Following Blaikie's distinction of the social setting, an ecological approach is used to examine the context of the use of IT in aged care, which are categorised as the macro or policy level, meso or organisational level, and micro or individual level. The following table summarises the case study approach including the levels of investigation, source of data and type of analysis.

Table 3: A summary of the levels of investigation of the case study

Analysis levels	Source of Data	Type of Analysis
Macro or policy level	Qualitative primary data: Three key policy documents	Analysis of rhetoric in text using Burke's perspective of 'dramatism'
Meso or organisational level	Qualitative primary data from organisational documents and in-depth, interviews with organisational staff focussing on organisational changes	Qualitative analysis: Analysis of themes
Micro or individual level	Qualitative primary data from individuals in their natural setting: In-depth interviews with organisational staff focusing on individual adjustments	Qualitative analysis: Analysis of themes

The study emphasises on how change is carried out and put into operations at the macro (policy), meso (organisational), and micro (individual staff) levels. The macro and meso analysis levels provide an understanding of how IT is applied in organisational change from the side of policy makers, administrators, and managers. On the micro or individual level, this research focuses on staff adaptation and application of IT in their work but does not extend to study how IT benefits residents at an aged care organisation. What IT means to aged care staff and how they apply IT in their work are more relevant to this research focus of change implementation and management. Nonetheless, the views of the residents as the indirect beneficiary of IT implementation at an aged care organisation would be useful for future research in IT-centred service delivery. For this case study, the exclusion of residents' view in the analysis of the micro-social setting is due to the focus on understanding the three levels of change implementation and management.

The multilevel analysis undertaken in this study resolves the tension in social constructivism, between the emphasis on agency (social actors having influence over their environment) and structure (the power relations in which social actors operate) (Spicer, 2001). In doing so, the study does not aim to justify whether agency has more influence over structure or vice versa. Instead, it aims to trace the reproduction, negotiation and contesting of specific concepts at the macro-level, all the way down to

meso- and micro-levels in aged care. Therefore, the gaps between interpretations can be acknowledged and addressed in future research and strategy developments.

3.6 METHOD OF DATA COLLECTION

In order to understand the realities of using IT in an organisation that provides residential aged care services, this study adopts the view that “social reality is produced and made real through discourses, and social interactions cannot be fully understood without discourses that give them meaning” (Phillips & Hardy, 2002, p. 3). Talk and texts have a profound role in our lives since they create the things that make up the social world, including our identities (Phillips & Hardy, 2002). By analysing spoken (from interview) and written texts (policy documents), we can see how things take shape through our own use of language.

3.6.1 Macro Level: Policy Context

3.6.1.1 Policy documents

The assumptions behind the selection and analysis of policy document hinge on the concept of discourse as social construction. Three major policy documents used in this study are selected from the international/global, national and local policy sites. They include:

- The Madrid International Plan of Action on Ageing (MIPAA) 2002 which represents the UN's global framework on ageing;
- The National Strategy for an Ageing Australia (NSAA) 2002 representing the Australian Government's national policy framework on ageing; and
- Our Shared Future: Queensland Framework on Ageing 2000-2004 by the Queensland Department of Families, Youth and Community Care.

Taken together, these texts represent policy development since the 1997 structural reforms in aged care and signify global to local policy developments in Australia.

3.6.2 Meso Level: Organisational context

3.6.2.1 The research site

The Sunshine State Residential Care⁴ (SSRC) is a not-for-profit aged care organisation with facilities operating throughout Queensland, servicing the needs of

⁴ Pseudonym is used to protect privacy

communities in four different regions of the state. The research study took place in one of its high level care facilities situated in a suburb of the capital city which houses nearly three hundred residents. Overall, the facility provides accommodation and care services for over five hundred residents who receive care and support in nursing home and hostel accommodation. The facility is completely self-contained, having, for example, its own resident doctors and pharmacy, and amenities like performance hall, film lounge, library, chapel, and hairdresser. Despite its size, the facility is designed to accommodate smaller communities on each floor to maximise opportunities for social interactions. Thus, the kinds of physical structures and the internal dynamics of this organisation provide an ideal context in which to investigate how the use of IT has been managed as part of the organisational change framework.

Prior to the implementation of the electronic documentation system in the SSRC, there was a change in the leadership in 2001 when a new Regional Manager was engaged. The Regional Manager, along with the Chief Executive Officer (CEO) and the Regional Finance Manager, worked on a project to introduce computers to the Board members in the residential aged care facility. A business case was presented and the project was endorsed by the Board. The Board agreed to grant capital support for the project provided that a pilot project was undertaken to gather primary evidence to evaluate whether computers would really benefit the organisation. The selected IT systems were on trial for a period of time in SSRC in order to evaluate their effectiveness. After approximately eighteen months of time-motion studies and other related evaluations of the benefit of using the computers, the system was gradually introduced into other facilities within the Queensland region. During this time, forty-five computers were brought into the SSRC to be used in documenting clinical evidence. Previously, the organisation had only seven computers which were dedicated to accounting and finance. Coupled with this innovation, there was also a structural transformation in the organisation.

The changing culture and philosophy were overtly managed by a succession of reforms and innovation later in 2001. Fundamentally, the SSRC was established under a consolidated Board and Management structure which brought together a continuum of services offered by the organisation. Under this new service structure, there was a higher possibility for continued care and integration. According to the *Strategic*

Directions for 2003 to 2008, the reform of their own aged care services within Queensland, and the establishment of the new SSRC, would guarantee that the organisation would meet current and future challenges faced by the industry. Interestingly, the name of the organisation was changed from one that suggested selective membership, to a more generic, business-like name. The transformation signifies the more inclusive character of the organisation, broadening the client services base. Changing the organisation's name also implies a change in philosophy and values from a benevolent organisation to a more secular, and commercially-oriented, aged care service provider.

A strategic plan, reminiscent of a corporate plan, was developed as part of the restructuring of the aged care services in Queensland. The *Strategic Directions* were used as a 'living document' whereby all development works, programs and activities were to be tailored to fit the key focus areas of the organisation. This plan clearly stated the vision, mission, values and philosophy of the organisation and was disseminated widely. The plan also identified fiscal sustainability and information technology systems as part of the strategic directions. Given the objective of implementing an integrated IT system that could enhance management systems throughout their facilities, the Board had to ensure that the computer systems they selected were viable. The Planning and Review Committee, which consist of five members of the Board, performed a thorough investigation of the IT system adopted by the organisation. At the beginning of this study in May 2004, the organisation was eighteen months through the process of IT introduction. It was at this stage that they evaluated the effectiveness of the IT system. At the end of the four-month research period, the organisation completed the evaluation and expanded the use of the system to its aged care facilities within the region.

The Board and management committee of SSRC is facing the challenge of maintaining government funding by providing greater accountability, while also providing the care needs of its residents. Due to the instigation of the RCS as the Commonwealth's funding infrastructure, a high number of low-care hostel residents in this organisation are relegated to RCS Category 8. With no government subsidy for residents in category 8, the management has had to make an ethical choice about delivering care for this group of residents and to develop strategies to address the

situation. Significantly, when the Regional Manager took office in 2001, one of the outstanding challenges was to reduce the number of Category 8 residents, which was the highest in Queensland. This conundrum exists in the context of the aged care reforms with the implementation of a new classification instrument. The Commonwealth government, as the purchaser of service, demands a higher quality of evidence from service providers to justify the amount of subsidy provided.

To preserve the humanitarian effort in aged care, the management has had to counter the problem through a balancing act, which inevitably leads to optimising available resources to accommodate the category 8 residents. In a past issue (early 2004) of the society's online quarterly magazine, it was noted that the hostels were experiencing financial difficulties and that the problem was offset by the nursing home funding. Moreover, when there is not enough evidence to justify allocation to a higher RCS category, a resident can be downgraded to a lower category with subsequent lower funding.

It becomes a major challenge for service providers to maintain high quality services for residents while losing subsidies from the government. This leads to the fact that, while financial and accounting systems are important in aged care, clinical information systems are in demand due to pressures for organisations to be accountable for the subsidies they get from the government. The need for evidence peaks on the clinical side because, according to the Regional Manager, “[the] admin doesn't generate the income, clinical side does. I mean it's what they document, it's what they put on the claim, that's our only source of income” (Regional Manager, personal communication, June 22, 2004). As a result, the birth of computer-based clinical documentation in this organisation was likely to have arisen from the RCS requirements – in addressing the lack of funding for low care residents and in vying for the best governmental allocation for residents' care.

3.6.2.2 Organisational strategic documents and supplementary evidence from interviews

As the organisation described under the research site was undergoing structural transformations, it provided the opportunity for a unique case study research into the analysis of changing social and technological practices at organisational and individual

levels. Organisational strategic documents including the Strategic Plan are used in the analysis. Other documentary evidence obtained from the organisation included a public brochure and newsletters, memos, a communiqué from the Regional Manager, and also some related online documentation. The researcher was also able to sit and observe a computer training session in progress with a few support staff. These organisational documents represent the framework of change used within the organisation. To supplement documentary evidence, interviews with key management staff were also used to understand the organisational change framework.

3.6.3 Micro Level: Individual Context

3.6.3.1 Interviews with management and direct care staff

Not only are shared meanings underlying arguments more valid in a particular social context, but they are also conditioned by the socio-cultural expectations in that context (Clegg, cited in Heracleous & Barret, 2001). The power dynamics emphasised in discourse analysis, shows the process of discourse happens in a context “in which certain players take prominence and others struggle for inclusion” (Monkman & Baird, 2002, p. 504). Struggle for validation implies that rationality is always situational (Clegg, 2002, p. 4) and conditioned by structural features in a person’s environment.

In order to understand the “production of discourse, as well as its reception by the audience” (Lupton, 1992, 145), face to face interviews with residential aged care staff who are part of the agenda of enabling better services through the use of IT in aged care were undertaken. According to Clegg (2002):

We can understand and constitute the senses that are being made as well as the conditions of existence and underlying tacit assumptions that make such sense possible. And in this way we can begin to understand the different forms of agency that find expression in organisational contexts, where the players make sense of the rules they actively construct and deconstruct in the context of their action (pp. 4-5).

The interview was semi structured and performed on site to allow the researcher to observe the layout and conditions of the actor’s experience.

Twenty-two people participated in the interview, consisting of management and direct care staff. Participants were interviewed at the organisation, during and in-

between shifts. To facilitate the interview, the researcher prepared a set of questions for the interview (see Appendix) and used the questions to guide, rather than format the discussion. Typically, the researcher would allow the participants to explore an issue and would try to revisit the assumptions of the person's account in terms of what it really means in relation to IT. The next section will discuss the techniques of data analysis used in this research.

3.7 DATA ANALYSIS

3.7.1 Rhetorical Analysis of Policy and Organisational Strategic Documents

Evident in the work by Brown and others (2000) is the struggle of various social forms of rhetoric as they attempt to describe, justify and promote their orientations in welfare management in Australia. In this context it is important to see the rhetorical influences on the construction of meanings, as asserted by Farrell (1999):

it is not until we think of the two-sided arguments, the running controversy, the ritual that becomes a crisis: in other words, not until we admit the liminal elements of struggle, difference, and thus, reflective judgement that rhetoric itself is redeemed (p. 85).

Stillar (1998) views language as symbolic action and cites Kenneth Burke's view of the symbolic act as "the dancing of an attitude" (p. 3). In his example of an everyday written text, a student's note to himself to avoid foreseeable consequences of sending a late assignment, he approaches text with a system of analysis covering discursal, rhetorical and social meanings. This strategy involves analysing characteristics of the texts, understanding how these texts are constructed, and exploring the implications of the texts in a given social context (p. 1). Stillar views text as systemic, functional and social (p. 181) and organises his analysis into these levels. More importantly, he characterises systems as the potential for 'meaning-making' processes that designate available alternatives, and their combinations into the relational values of meaningful elements (p. 182).

The method of analysis for the macro level is based on Burke's (1969a; 1969b) perspective of dramatism. The perspective of dramatism made use of a pentad to analyse a particular event by determining the 'who' (agent), 'what' (act), 'where and when' (scene), 'how' (agency) and 'why' (purpose). In Burke's language, these are called the agent, act, scene, agency and purpose. Burke's perspective of dramatism

invokes the idea of a context-specific 'scene', in which everyday words have underlying grammatical relations that influence how we understand and react to these words (Roy, 1995). Burke's perspective is useful given that scenes can be defined grammatically, rhetorically, socially, economically, and politically (Roy, 1995). Therefore, the perspective of dramatism guides analysis on human relations and human motives through an inquiry into clusters and functions of terminologies (Burke, cited in Stillar, 1998).

Institutional, industrial, and organisational reforms cannot be achieved without a strategy that draws on rhetoric or "the use of words by human agents to form attributes or to induce actions in other human beings" (Burke, 1969b, p. 14). Burke defines a human as a "symbol using animal" (1966, p. 16) prone to making and misusing the symbols in its recourse for actions. Stillar (1998) emphasises this point as an attribute of our biological and sociological condition; hence, we aim for 'identification', which means giving a name to something, or identifying with something. Identification is found in the notion of 'substances', as in objects, professional affiliations, attitudes, ideas, and others, which we tend to associate with a person or things we identify with. By constructing something of a similar substance and sharing it, we are united with others (Stillar, 1998). Further, Burke's definition also goes on to state the second premise of humans as "goaded by the spirit of hierarchy" (1966, p. 16); thus, identification is carried out in a context of social order which validates certain types of shared meanings (Stillar, 1998). The aim of rhetoric is to make a message persuasive to the person to whom the message is addressed. Accordingly, undertaking rhetorical analysis deals with the strategies of persuasion, identifying the manner in which the texts draw on identification and consubstantiality, the way the text is addressed, or the way the text seeks to transform existing order by re-constructing 'x' in terms of 'y', in the context of 'z' (Stillar, 1998).

The rhetoric of the meanings of IT, hence, can be analysed through the use of Burke's pentad and rhetoric in text. Given that this research focuses on the strategic initiatives within aged care, the pentad and ratios are applied within the language used in aged care strategies to identify the structure and functions of elements of symbolic actions. Following Burke's perspective, it is important to denote the scene surrounding the policy development as the container for acts and agents. The pentad consists of five

terms, namely, act, agent, scene, agency, and purpose, from which a representation of ‘reality’ is constructed (Stillar, 1998). A combination of selected pentadic resources, which is known as ratios, will allow for different constructions of motive (Stillar, 1998). The analytic and interpretive power of Burke’s pentad rests in the interactive pairs of the pentadic elements, such as ‘scene-act’ and ‘agent-purpose’. The importance of ratios to explore the discursive practices within text is emphasised by Stillar (1998) because without ratios the pentad is merely an index of ideational structure of text. To incorporate both pentad and ratios, the analysis is divided into first-level analysis of the pentad and second level analysis of the ratios. The third and final analysis is envisioning the scene in its broader context.

3.7.1.1 First level analysis

The first level of analysis is about designating some words (or answers) to the elements of pentad in order to create “a rounded statement about motives” (Blakesley, 2002, p. 23). The following pentad (1.0 to 4.0) illustrates the varying answers and thus, motives, as found in the analysis of policy documents. Nonetheless, elements such as act, scene, agent, and agency are maintained across the pentad (in the policy context) to demonstrate its influence on the organisational context.

Table 4: Pentad 1.0 - Sustainable service provision as the institutional rhetoric in the reforms of aging policies

Act:	Policy integration (‘mainstreaming’, ‘reform’, ‘integration’)
Scene:	Population aging (as ‘ecological crisis’, ‘national crisis’, or ‘state’s long-term pressures’)
Agent:	The UN, Australian government, Queensland government
Agency:	Governance strategies that rely on IT; for example, ‘research’ and ‘strategic planning’; ‘evidence-based’ actions and ‘forward-thinking’ strategies; and strategic and ‘whole-of-government’ approach.
Purpose:	To encourage sustainable practices (in this case, efficient use of resources) To encourage ‘partnerships’ between governments, business and the non-profit organisations

Table 5: Pentad 2.0 - The rhetoric of 'A Society of All Ages'

Act:	Policy integration (mainstreaming, reform, integration)
Scene:	Population aging (as ecological crisis, national crisis, or state's long-term pressures)
Agent:	The UN, Australian government, Queensland government
Agency:	Governance strategies that rely on IT; for example, research and strategic planning; evidence-based actions and forward-thinking strategies; and strategic and whole-of-government approach.
Purpose:	To encourage the acceptance of aging into development framework <u>Global level:</u> 'Society for All', 'A Society of All Ages'; <u>National level:</u> 'An Older Australia, Challenges and Opportunities for All'; <u>Local level:</u> 'Everyone's Future', 'Our Shared Future', 'A State for All Ages'.

Table 6: Pentad 3.0 - The use of managerial-based strategies in aged care reform

Act:	Policy integration (mainstreaming, reform, integration)
Scene:	Population ageing (as ecological crisis, national crisis, or state's long-term pressures)
Agent:	The UN, Australian government, Queensland government
Agency:	Governance strategies that rely on IT; for example, research and strategic planning; evidence-based actions and forward-thinking strategies; and strategic and whole-of-government approach.
Purpose:	<u>Global level:</u> To set international guidelines which promote sustainable practice in view of 'global' recognition of impending ageing populations and the need to balance resources; <u>National level:</u> To persuade agencies of care to act responsibly through the institution of programs and best practice to 'balance' service provision. Sustainable practices, including efficient use of resources will also sustain the increasing demand for aged care; <u>Local level:</u> To persuade human service agencies to provide services within budget limitations, and maintain 'accountability' to funding bodies at State and Federal levels. The outworking of sustainability in daily practices of service providers is guided by international guidelines and national standards.

Table 7: Pentad 4.0 - Implications at organisational level

Act:	Organisational restructuring for long-term sustainability
Scene:	Increase in demand while funding becomes more 'competitive'
Agent:	Aged care organisations
Agency:	Governance strategies that rely on IT; for example, strategic planning, performance measurement and reporting, and innovations in service provision.
Purpose:	To provide services within budget limitations and maintain accountability to funding bodies at State and Federal levels.

3.7.1.2 Second level analysis

The second level analysis involves the use of ratios to help “multiply the perspectives from which we view motives and thereby expose the resources of ambiguity people might exploit to interpret complex problems” (Blakesley, 2002, p. 35). Since the elements of the pentad are already determined in the first level analysis, the next stage asks the question:

How does the (scene) influence the (act)?

According to Blakesley (2002), by substituting the underlined parenthesis with an element of the pentad, this is the question that would implicate all the possible ratios (p. 35) such as:

- Act-scene – *How does policy integration influence the aged care context?*
- Act-agent – *How does policy integration influence the UN (global), the Australian (national) and Queensland (state) governance system?*
- Act-agency – *How does policy integration influence approaches/technologies used?*
- Act-purpose – *How does policy integration influence policy goals?*
- Scene-agent – *How does population ageing influence the UN, the Australian and Queensland governments?*
- Scene-agency – *How does population ageing influence the methods used to respond to this problem?*
- Scene-purpose – *How does population ageing influence policy goals?*
- Agent-agency – *How do social organisations influence policy approaches?*
- Agent-purpose – *How do social organisations influence policy goals?*
- Agency-purpose – *How do approaches/technologies used influence policy goals?*

As a result, these permutations of the elements of the pentad raise a range of different questions which can assist in a comprehensive, rather than partial, understanding of the phenomenon.

3.7.1.3 Third level analysis

In line with what White (1994) denotes as 'persuasive discourse', reform agendas are promoted and shaped through policies and organisational strategic documents, which communicate the discourse to the public. In turn, individuals use ideas and new information to form and interpret their preferences within the constraints of their immediate circumstances (White, 1994, p. 516). This cyclical process elucidates the position of social constructionism, emphasising "the collective generation [and transmission] of meaning as shaped by the conventions of language and other social processes"⁵ (Schwandt, cited in Crotty, 2003, p. 58). Therefore, the third level analysis concerns rhetorical elements which create "[i]dentification, or an alignment of interests and motives", which create consensual or shared meanings (Blakesley, 2002, p. 42).

3.7.2 Thematic Analysis of Interviews

This research builds on the epistemology of interpretive research to explore frames of meaning and employs a critical analysis of how meanings are reproduced, negotiated and challenged in deeper, discursive structures. The meso and micro level analysis of interviews are based on the qualitative analysis of themes as developed by Straus and Corbin (1998). An analysis of themes follows an inductive procedure that builds categories according to themes emerging from the data (Ezzy, 2002). The analysis of themes is followed by three phases of coding: open coding, axial coding, and selective coding (Ezzy, 2002).

This section describes the stages of the analysis of themes of the interviews with management and direct care staff (supplemented by field notes). Where necessary, examples are given:

⁵ Michael Crotty (2003) added the comment "and transmission" to the work by Schwandt, who made a distinction between constructivism and a genuine social constructionism.

1. Tentative classification.

The initial phase involved the generation of open codes, which were assigned on the basis of the underlying conditions of specific events, personal relationships with others, and the approaches adopted by the participants in their work, including the perceived effects (Crisp, 2000).

i) Participants are designated as management or direct care staff. However, some staff roles can be ambiguous, for example, an activities officer (direct care) who is also the coordinator (management-related) of the diversional therapy department. Based on the content of the interview and to facilitate analysis, I have included this person under management staff.

ii) For each participant, codes are open for each of their responses. For example:

Management staff, male, 3 years working in the organisation:

[Excerpt 1; Code: inefficiencies of previous system] *The software used for the journal ledger is not very efficient still. It's not very efficient, which it takes a lot of resources and it makes, it keeps people waiting, because with the old server and open network, it really is not very efficient at all.*

2. The next phase of coding as developed by Strauss and Corbin (1998) involved the development of axial coding, in which similar codes were grouped and re-grouped under a central category (Ezzy, 2002). The codes were also compared to policy and organisational documents to ground the meaning of codes into the context of their production. The generation of central coding categories or themes was facilitated by the process of comparing and contrasting interview data with documentary evidence. The process involved the identification of a common theme based on the tentative codes opened for each individual participant. It also implicated rigorous checking of the thematic instances with the actual transcript and audio records of the interview. For example:

Table 8: Participants' frame of reference and typology of responses

Frames of reference	Typology of comments and their possible <i>subtexts</i>
1. Technologically related change	<ul style="list-style-type: none"> • It's a computer world (<i>Computer driving the change</i>) • Computer is becoming part of daily life (<i>Prevalence of computers</i>) • Computers as part of modern age (<i>Computer drives modernisation</i>)

	<ul style="list-style-type: none"> • Computers are used for effective management systems (<i>Computers make management more effective</i>) • Everyone is expected to use electronic documentation (<i>Computerised documentation is the norm</i>) • Computers as progress (<i>Computers can create an environment of progress</i>) • IT bring globalisation to the [type of] operations (<i>Globalisation initiated by IT</i>)
2. Globalisation	<ul style="list-style-type: none"> • Computer as today's technology (<i>Use computers or be left out of the process</i>) • Computer as the way to go (<i>Normative process</i>) • There will always be a market for information and information technology (<i>in a globalised world</i>) • Moving on with things (<i>or moving with the rest of the world</i>) • Ageing boomers (<i>a global trend</i>) will want better quality residential care.
3. Mainstreaming the process of ageing (change management)	<ul style="list-style-type: none"> • Bringing the organisation into 21st century (<i>a transition period</i>) • Strategic management (<i>using a future-oriented approach</i>) • Evidence-based care management (<i>research and development</i>) • Industry requirements for evidence (<i>monitoring operations</i>) • To substantiate funding (<i>monitoring operations</i>) • Following guidelines (<i>by the Commonwealth</i>) as required for accreditation • Computers used in streamlining forms (<i>service integration, no duplication</i>) • Using computers as a personal performance indicator (<i>monitoring performance</i>) • Legal implications (<i>liability of service providers</i>)
4. Progress	<ul style="list-style-type: none"> • Cannot go back to the previous state, for instance, not having computers, or a more hands on nursing approach (<i>Different environment and approach</i>) • Changes are for the better (better means, e.g., <i>less cost, better services, better quality</i>) • Giant step (<i>forward</i>) from an entrenched paper system • In dark ages and a long way to go (<i>different periods</i>) • Shows forward vision (<i>growth</i>) • Improvements of the existing system (<i>to meet current standards</i>)
5. Capacity	<ul style="list-style-type: none"> • <i>Age-related</i>: young ones pick up quicker and have more modern ideas • Computer makes work easier (<i>facilitation</i>) • Computer is useful at every level (<i>enabling process</i>) • Computer improves performance—efficiency and flexibility (<i>facilitation</i>)

6. Socio-technical change	<ul style="list-style-type: none"> • Computer alone doesn't improve things (<i>There are other factors for change</i>) • Computers do not necessary relate to quality care (<i>Quality care also means something else</i>) • Computers are merely a different way of recording information—still rely on human interactions, e.g., interviews, observation, and assessment to collect information (<i>Human vs. non-human capabilities</i>) • Computers as the driver's licence to running the organisation (<i>It is a tool</i>) • Computer cannot replace labour (<i>Human vs. non-human capabilities</i>) • Computers are as good as the person using it (<i>Human vs. non-human capabilities</i>) • Computers cannot always pick up the things you want (<i>Human vs. non-human capabilities</i>)
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3. The search for interesting cases or instances, such as when an RN was faced with a problem with data entry at the nursing station. The computer was not responding and observation notes indicate the RN's embarrassment and frustration.
4. Re-reading the themes and situating the meaning in terms of the organisational change framework. Re-trace steps 2 and 3, where necessary.
5. Re-organising the themes and situating the meaning in relations to the policy framework. Re-trace steps 2 and 3, where necessary.
6. In the final phase of theoretical coding (Ezzy, 2002), selected meanings and interpretation of IT, which support the importance of 'pluralism' and 'new forms of coordinated action' in the framework of social construction (Gergen, 2001), were defined. This involves the development of an overall understanding of the situated meanings through mapping and drawing relationships between one theme and another.

3.8 VALIDITY AND TRUSTWORTHINESS

Analysis of discourse has been critiqued for some inherent challenges (Ainsworth, 2001) and also in the way the analysis is conducted (Antaki, Billig, Edwards, & Potter, 2003). However, like most qualitative research, the choice of research method that is philosophically and methodologically appropriate to answer the research question (Caelli, Ray, & Mill, 2003) will be one way to counter these problems. Another way to demonstrate rigor in research is through a meticulous selection of the research method (Caelli et al., 2003).

Concepts of reliability and validity in qualitative research in general, and specifically in discourse analysis are much debated. Many argue that these concepts are not based on a single, fixed or universal definition (Blaikie, 2000; Padgett, 1998; Winter, 2000) and instead are contingent upon the processes and intentions of a research project. To establish reliability in this research project, the researcher has ensured that theoretical approach, and orientations of research and analysis are congruent (Caelli et al., 2003). Validity in this research is established by checking the meaning with participants (Minichiello, 1990), constant checking with original data (Kvale, 1996), and also rigorous comparisons with other textual resources.

3.9 ETHICAL IMPLICATIONS OF THE RESEARCH

The researcher obtained the permission of the organisation through liaising with the secretary of the organisation's ethics committee. Additionally, the project was granted ethical clearance by the Queensland University of Technology Research Ethics Committee. The clearance was subjected to the approval of the organisation which was later clarified with the Research Ethics Officer.

The researcher has abided by the ethical regulations, which include the following criteria of the management of confidential information:

- The researcher has treated with confidence all information supplied by the research participants.
- As required by the university's ethics committee, participants signed a consent form indicating their rights to privacy and gave verbal consent to audiotape the interview.
- Full access to the tapes and transcriptions is restricted to the researcher.
- Physical records have been kept securely in a locked filing cabinet in a room with restricted entry (using QUT Identification card and swipe access).
- Computer files of the transcription are limited to the researcher on a password-protected computer.
- The researcher has included only analysed data and removed any identifiable information of individual participants and the organisation in the report.

3.10 CONCLUSION

This chapter has synthesised the contextual factors shaping the use of IT in the aged care sector that leads to the idea of changing policies and practices at global, national, and local levels to accommodate new technologies in service provision. The literature review demonstrates the gap in our understanding of technology, which could result in fragmented views of the process of technological integration into the existing service context. The social constructionist approach delineates that while the discourse in aged care flows from the individual, the production is governed by rules, and therefore, sanctions particular identities and preferences in the aged care context (Checkel, 1999). Therefore, the significance of this study is in its analysis of multiple levels of discourse production in the context of aged care, which contributes to the idea of 'coordinated actions' (Gergen, 2001) or the integration of policy and practice through the reform process.

CHAPTER 4: JOURNAL ARTICLE 1

STATEMENT OF JOINT AUTHORSHIP AND AUTHORS' CONTRIBUTIONS IN THE RESEARCH MANUSCRIPT WITH THE TITLE OF:

The Role of Information Technology (IT) In Australian Aged Care Reform

Electronic review completed at the Australian Health Review 2006.

RAHIMAH IBRAHIM (Candidate)

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Chief investigator, significant contribution to the planning of the study, literature review, data collection and analysis, and writing of the manuscript.

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Significant contribution in the planning of the study (as associate supervisor) and assisted with data interpretation, preparation and evaluation of the manuscript.

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Significant contribution in the planning of study (as principal supervisor) and assisted with the evaluation of the manuscript.

Signed.....Date.....

Abstract

The purpose of this article is to investigate Australia's aged care policy development in the context of globalisation. Due to a lack of understanding of the global to local progression of directives, many health and aged care staff are rendered powerless to the transformations in practice environments. Three key policy documents were selected to represent global to local policy developments in ageing. Based on an analysis of rhetoric in texts, these policies justify reform by identifying ageing as a global concern. The exigency is associated with the reform principle to promote ageing in place, or the creation of organised service delivery systems, which can distribute flexible services across the spectrum of health and aged care; hence, the integration of IT into the aged care system is consequential. However, the convergence through the coordination of policies and integration of service delivery systems typically result in the standardisation of principal activities in aged care organisations, including management and delivery of care. Thus, from a global to local perspective, the introduction and development of information technology (IT) in provider organisations should follow a glocal approach to ensure a balance between standardisation and specific care practices.

Keywords: globalisation, aged care reform, standardisation

Word count: 3257 words

What is known about the topic?

Reform in aged care policies instigates organisational changes that transform the environments of practice.

What does this study add?

The reform process is rarely perceived at the intersections between global, national and local policy developments. An analysis of global to local policy documents demonstrates the increase in standardisation of management and care practices to enable the control of an integrated service delivery system.

What are the implications for practice?

While promising flexibility, an organised service delivery systems pose the risk of standardising management and care practices. Therefore, the potential of a glocal approach in the integration of IT is significant due to an emphasis of creating a balance between the mechanisms of control (i.e., forces of standardisation) and the relationships of care (i.e., specific values and practices that are inherent in organisations).

Introduction

While health care professionals are encouraged to embrace reflective practice in their casework, counselling, or the provision of programs or services, this spirit rarely extends beyond the scope of front line service provision. With the current sweeping changes across health care and human service organisations¹⁻⁴, front line staff and service practitioners have to deal with new and demanding work procedures⁵⁻⁸. The imperative to make improvements through the reorganisation of service delivery systems is often critiqued for wrongly placed priorities, negation of local needs, and unreflective use of management technologies that sometimes contradict the values of practice^{7, 9-14}.

Paradoxically, if the architecture of the service system is streamlined to maximise efficiency, then frontline service provision will require reinforcement of interpersonal human relationships, built on inherent cultural values like respect and trust¹⁵⁻¹⁷, to enable effective collaboration between management and service delivery. Subsequently, the cognitive dissonance¹⁸ from having to compartmentalise managerial and human needs can disrupt service provision and undermine the role of service professionals. In such scenarios, the microcosm of a daily working world appears remote from its relative macro processes. Driven by global directives and guidance for policy, these far-reaching processes effectively mainstream a singular philosophy and modus operandi through reform that is little understood at frontline service delivery.

The aged care structural reform

Reform of the health care system has been a significant trend in many developed countries induced by the need to be more efficient and effective¹⁸ and recently, the long-term care system is now moving in the same direction¹⁹⁻²¹. Hence, in the

Australian context, to fulfil the 1997 Aged Care Structural Reform principles such as continuous quality improvement and ageing in place, frontline service providers in aged care organisations are often expected to institute best practice solutions. Due to the amounts and types of cost that can be imposed on providers, many of them are keen to engineer strategies that will sustain or expand their control of the market^{22, 23}. Such large-scale reorganisation requires staff to understand the tenets of the reform agenda so that they can make sense of the changes, and hence, engage in reflective practices. Nevertheless, in a highly demanding healthcare environment⁴ and in systems relying on a prescriptive approach to improve²⁴, information about the reform process often ceases to develop beyond the ranks of managers and bureaucrats. Meanwhile, staff outside these tiers remain powerless to initiate the changes they do not fully understand. As a case in point, many nursing home staff and managers are often inundated with conflicting practices, a situation which led to confusion and resulted in apathy towards the structural reform in aged care^{4, 25}. Therefore, to improve clarity and instil ownership of the change process, it is important that the change framework and the underlying connotations of the principles of the aged care reform are fully understood.

Situating information technology (IT) in aged care policies through rhetorical analysis

Policies on ageing implicitly require organisations to use technology to facilitate predictive outcomes to sustain the viability of the aged care sector. Aged care policies developed by governments and social organisations, as seen from the mainstream of economic development perspective, require technology for rational planning of activities and to facilitate the shift toward efficient and effective management. Consequently, the

use of technology to manage information in a digital format²⁶ has enabled many modern businesses to improve efficiency and these practices have permeated through to the public sector. Accordingly, the applications facilitated by unfamiliar technology that are implicitly required to implement public policy have added to the complexity in policy, processes and procedures²⁷. Therefore, changes in micro processes involving the use of IT systems in the day-to-day work of practitioners relates to underlying reasons for policy reform.

To understand reform approaches, Farmer and Patterson²⁸ argue that rhetoric has a practical dimension to practitioners as it promotes the development of critical thinking ability and an awareness of persuasive repertoires. The authors recommend that practitioners should draw on rhetorical analysis as a technique to facilitate better engineering and reengineering in administration. Significantly, the increase in the number of older people in society occurs at the same time as progressive developments in worldwide liberalisation of the economy and the use of IT. As such, the three components of population ageing, liberalisation and IT often appear in the same body of policy documents to create a conceptual model of exigency, from which a solution must be introduced.

In light of the consequences for institutional reforms and organisational change frameworks, this article presents the result of a rhetorical analysis of global to local ageing policies. The purpose of this paper is to demonstrate how the political wheels of aged care policy reform in Australia, initiated at the global level, drive local responses to aged care services. This analytical process highlights the need for explanations of global

directives that require organizational adaptation, and that, subsequently, impact on the day-to-day work of local service staff.

Method

This paper uses a methodology based on Burke's²⁶ perspective of 'dramatism' in order to identify the structure and functions of symbols in the language used in aged care policies. According to Burke (1969), spoken and written language bears grammatical constructs that identify, persuade and convince hearers of the validity of arguments put forward by the speaker or writer. Any text bears signs of its ideological foundation, and, therefore, its persuasive rhetoric. In the contemporary situation, rhetoric, essentially a referent to an earlier oratory history, contains persuasive devices that can be shown to influence the hearing or reading audience by means of identification strategies that align with the speaker's interests.

Burke's analytical framework based on the relationships between the elements of a pentad²⁶ is a "rounded statement about motives" (p. xv) that can be used to identify "the function of a word in a scene performed by a person or agent, by a means or agency for a specific purpose"²⁹. The five elements of the pentad, namely, act, agent, scene, agency, and purpose, captures the details of change through describing:

1. Act—What is done
2. Agent—Who commits or performs the act
3. Scene—Where and when the act occurs
4. Agency—How the act is accomplished
5. Purpose—The motive for the act²⁹ (p. 329).

In applying this framework to understand texts and documents, it is important to denote how specific associations of the elements of the pentad create a representation of reality surrounding the policy development process²⁸. Thus, an application of Burke's perspective can demonstrate how meanings and ideas are conveyed from the producer of the text to the reader. The underlying motives, in a textual rather than a deliberate attitudinal sense, for aligning agreement about proposed ideas such as mediation and collaboration, can be shown by using this method.

Data collection

Pertinent documents were selected from authorities on health and aging: the UN (global level), the Australian Commonwealth Government (national level), and the Queensland State Government (local level). These documents are representative of the global to local-level of policy developments on aging since the turning point in the development of policy and programs produced after the UN's International Year of Older Persons in 1999. In this paper, three key strategic documents are examined. The Madrid International Plan of Action on Aging (MIPAA)³⁰ is selected as an example of policy documents at the global level. At the national level, the "National Strategy for An Ageing Australia" (NSAA)³¹ is chosen on the premise that its national policies emulate the principles and plan of action initiated at the international level. Local policy is represented through "Our Shared Future: Queensland Framework on Ageing 2000-2004" (OSF)³². These documents, which henceforth are designated as MIPAA, NSAA, and OSF, are analysed together as a collection of texts which is complete and thematically unified to serve the purpose of research³³.

In the document analysis, the scene is denoted as population ageing (for instance, at the global level, the national level, and the local level). Thus, within the specific scene, the relationships between the agents (the policy makers), the agency (the means used to accomplish the policy), and the purpose (the motive or reason) for the act of developing and implementing policy are critically examined. The findings from the analysis are discussed in terms of three major themes: 1. Recommendations from policy documents; 2. policy development in the context of globalisation; 3. ageing in place as a means towards organised delivery systems. These findings highlight the moves that underpin processes involved in the global to local flow of policy directives.

Findings

1. Recommendations from policy documents

Discourses at various levels - global, national, and local - demonstrate the transmogrification of meaning from macro policy levels to micro levels of service delivery. At all levels of political action, namely, global, national and local, IT is employed by the *agents* (the UN, Australian and Queensland government) as the *agency* to facilitate the convergence towards the use of singular approach and method in service provision (*purpose*); a case which involves progress into the future with strategic use of resources, collaboration of various stakeholders, ensuring the rightful access by older people to allocated resources, and planning for an outcome (via research and long-term strategies). The backdrop of this flow of events is globalisation, which is woven carefully into the policy documents.

2. Policy development in the context of globalisation

The analysis of the policy documents demonstrates that globalisation is changing the way people should relate to their world, and hence, changes are placed to anticipate the effects of the transformation. Globalisation denotes a step into the ‘future’ and into the ‘millennium’ where there is a different chain of command in the relationships and interactions between organisations^{34,35} and therefore, should be addressed differently in policies. The poignant allusion of population ageing to globalisation also points to the rationale for ‘a coordinated framework’ to respond to the ‘far-reaching’ consequences of population ageing³¹ (p. 3); in other words, the transformed *scene* is now able to determine the corresponding *act*.

[Insert Table 1 about here]

Consequently, ‘a universal force’ would require a global regulatory framework as proposed in the MIPAA, which constitutes ‘mechanisms’ at appropriate levels³⁰(p. 27), and in this case, that would entail national and local implementation. It would also entail the setting of ‘standards’ at these levels to ensure that programs and services can properly be monitored.

As globalisation is the common theme across all levels of policy, it is important to make explicit the contextual meaning of globalisation. A useful description is offered by Gunter and der Hoeven (2004)³⁶, which states:

[g]lobalization is a term that is used in many ways, but the principal underlying idea is the progressive integration of economies and societies. It is driven by new technologies, new economic relationships and the national and international

policies of a wide range of actors, including governments, international organizations, business, labour and civil society. (p. 1).

Therefore, as policies refer to globalisation, it is basically reinforcing the principles of integration through mechanisms of economy, policy and technology.

3. Ageing in place as a means towards organised delivery systems

Since the introduction of the Aged Care Act 1997, ageing in place has been the philosophy of care that enables older individuals to remain in their present service location despite increasing dependency³⁷. Nonetheless, because research has shown that older people prefer to live independently in their own homes for as long as possible, and therefore, many long term care strategies involve the provision of services so that older people can remain at home. To achieve this purpose, ageing in place is an organised delivery systems approach toward meeting the needs of older people – one that moves away from inserting quick fixes into the current system and which invokes the idea of efficient and responsible service provision. With the shift towards community-based service delivery³⁸, an organised delivery systems approach becomes a way of engaging diverse stakeholders to ensure flexibility in the use of resources and in the continuity of services, as needed by the user. For this reason, IT is not ad hoc, but integral to the requirements of the aged care system to meet both policy imperatives (top down) and the needs of the service users (bottom up). The use of IT in provider organisations, therefore, should be developed as an integrated resource in research and planning and should support the knowledge interface between stakeholders.

[Insert Table 2 about here]

On the other hand, coordination of policies has also ensured that the needs of the users are coded as to age in place, or more aptly, in their own homes. A possible negative impact of coordination is the homogenization of the needs of all older people to be delivered at home or in the community, regardless of their healthcare needs.

Discussion

The global to local flow of policy directives

Reforms of policies on ageing are consistent with the view that ageing has become a global concern and, thus, there is a need for international and local partnerships to develop coordinated strategies on ageing. International cooperation, however, also means “the widespread adoption of a new policy, a new approach to the delivery of public services or a new method of program management, taking full account of the country context”³⁵. In the process of international cooperation, mechanisms that facilitate this convergence (including competition, replication, distribution of best practice, trade and capital mobility) have to be mobilised³⁹. A dynamic of multi-organisational collaboration between two or more government departments, between government and the private sector, and between government and public or private non-profit sectors, creates a new working relationship⁴⁰, which is characteristic of multi-sector approaches to global ageing.

Globally, an international body such as the United Nations (UN) provides leadership by advancing priorities in ageing issues and directions. This international body shapes the international context on ageing through the development of global policies. These global policies on ageing include themes such as “a society for all ages”, providing a template

for international and national action⁴¹. Sidorenko³⁹ asserts that the mainstreaming of ageing under the MIPAA is directed at two levels: at the international level, through collaboration and policy integration; and at the national level, through the inclusion of ageing and issues surrounding older people into development frameworks and strategies to eradicate poverty. The reproduction of the theme from the global level into individual countries' policies and programs is evidence of the mainstreaming of ageing.

With the weight of evidence pointing to similar social and economic trends in developed nations, international directives increasingly inform policy design. One of the important changes noted in the field of public policy is that directions are coinciding with a new turn in institutional discourses towards sustainable development. To illustrate, when sustainability was recognised by the UN as a core challenge around the globe in 1996, the mainstreaming of ageing into the agenda for sustainable development created consequences that flowed into various scales of governance. For instance, the MIPAA “encourage[s] policy and programme coordination of international institutions and coherence at the operational and international levels to meet the Millennium Declaration development goals of sustained economic growth, poverty eradication and sustainable development” (p. 42). Likewise, the Australian Commonwealth Aged Care Structural Reform 1997 pinpoints the beginning of a chain of policy developments that have transformed the national context of ageing, situating it within the logic of sustainable growth. Consistently, the Queensland State framework for ageing is integrated in the Smart State's agenda for sustainable development. More importantly, a range of administrative and documenting processes that require IT, and are thus dependent upon it, underpin IT mediations between competing stakeholder organisations and the

enforcement of a new method of management. It is, therefore, fundamentally important to recognise IT as a necessary component of organisational practice that implements policy in the aged care sector.

Along with innovations in aged care, there are increasing pressures on standardisation and regulation of business activities through accreditation and certification at local levels. However, there is little or no support for the initial (and often enormous) financial outlay to integrate IT into the existing system. The traditional means of paper-based information management cannot provide instant access to comprehensive information when needed. Within a wider discursive framework of national developments using IT-based infrastructure, the concept of sustainability is reinforced and made relevant to every stakeholder and also to shareholders in the aged care system. This also means that progress is necessary to achieve financial (i.e. taxable income), ecological (i.e. environmental), social (i.e. social justice), and cultural sustainability (i.e. global interdependency). In other words, the language of sustainability smuggles in with it the notion of evidence-based (i.e. calculated risk), that makes it impossible to argue against development, thereby placating people who were opposed to the use of technology and reckless development.

Conclusion

The formulation and implementation of policies on ageing is a worldwide phenomenon and is integrated towards making approaches and operations in aged care more sustainable. Based on the principles of liberalisation, the processes of integration and coordination of policies occurs from the global to local levels to distribute best practices

and technologies into the aged care system. Hence, organised delivery systems and ageing in place are introduced to create a groundwork which requires the standardisation and regulation of activities in aged care organisations. Nonetheless, the lack of balance between the global and local needs have typically prioritised relationships of care. In this sense, the mainstreaming effects of global ageing policy should be met with stronger commitment towards adapting and tailoring that singular approach and process to the needs of the older people of a particular community, an approach known as the 'glocal strategy'^{15, 42}. Therefore, how IT is incorporated to optimise the balance between the mechanisms of control and the relationships of care is therefore significant. When implementing significant changes at the local service delivery level, care should be taken to inform service delivery staff of the mechanisms that flow on from the global and national level.

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Table 1: Excerpts of policy documents describing the challenges of globalisation

Global: UN's MIPAA	Whereas specific policies will vary according to country and region, <i>population ageing is a universal force</i> that has the <i>power to shape the future</i> as much as <i>globalization</i> . (p. 6)
National: Australia's NSAA	The National Strategy for an Ageing Australia has been developed to provide a <i>coordinated national response to issues surrounding population ageing</i> . (p. v)
Local: Queensland's OSF	As we move forward <i>into the new millennium</i> we need to achieve two things. The first is <i>a new experience of ageing</i> for older people, now and <i>in the future</i> , characterised by <i>broader opportunities and increased participation</i> (screen 3).

Table 2: Excerpts in policy documents referring to organised delivery systems

Global: UN's MIPAA	[To] promote the <i>establishment and coordination of a full range of services in the continuum of care, including, inter alia, prevention and promotion, primary care, acute care, rehabilitation, long-term and palliative care so that resources can be deployed flexibly to meet the variable and changing health needs of older persons.</i> (p. 27)
National: Australia's NSAA	It will be important in working <i>towards better service integration</i> that we do not allow population ageing to drive haphazard development of new services <i>at the interfaces between care sectors. Reform options</i> should look at how existing systems and programs might be <i>better organised or differently funded to support integration of care</i> and also how this might occur at the <i>local level as well as at state and national levels.</i> (p. 57)
Local: Queensland's OSF	It [The Queensland government] is also committed to ensuring that <i>policies</i> affecting older people are <i>coordinated</i> and that <i>services are better integrated</i> to meet the needs of local communities. (screen 3)

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This study is part of the doctoral candidature of Ms. Ibrahim. Ms. Ibrahim was responsible for the conception of the research, data collection and analysis. Dr. Barnett, who is the associate supervisor of the student, contributed significantly in the development of theoretical framework, the applications of analytical techniques, and the review of the manuscript. Dr. Buys, who is the principal supervisor of the student, played a significant role in the planning of the study and the review of the logical construction of the manuscript.

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Competing interests

None identified.

CHAPTER 5: JOURNAL ARTICLE 2

STATEMENT OF JOINT AUTHORSHIP AND AUTHORS' CONTRIBUTIONS IN THE RESEARCH MANUSCRIPT WITH THE TITLE OF:

Introduction of an electronic documentation system: Impact of IT integration on residential staff in an aged care organisation

Ibrahim, R., Barnett, K. R., and Buys, L. R. (2006). Introduction of an electronic documentation system: Impact of IT integration on residential staff in an aged care organisation. *Geriatrics, Autumn*, 11-19.

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CHAPTER 6: JOURNAL ARTICLE 3

STATEMENT OF JOINT AUTHORSHIP AND AUTHORS' CONTRIBUTIONS IN THE RESEARCH MANUSCRIPT WITH THE TITLE OF:

Information Technology (IT) and Sustainable Change within the Domain of Local Practice

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Manuscript title

Information Technology (IT) and Sustainable Change within the Domain of Local Practice

Running title

IT use and changing aged care practices

Abstract

Objective: To explore the local service delivery level when IT was introduced into a non-profit residential aged care facility.

Method: Theoretical sampling provided participants from occupational groups staffing day-to-day work activities. Twenty two participants were interviewed about the compulsory use of computers in daily routines, and the role of IT in service delivery.

Findings: Analysis of interview data identified five themes. Three related to local service delivery issues that stemmed from the restructuring of daily work practices. Two themes, which enforced the change at local level, related to the idea of sustainability.

Conclusion: IT was regarded as part of the new focus in aged care towards outcome-related goals such as efficiency, fiscal sustainability and quality. Nonetheless, these outcomes were perceived by staff to be separate from the care given to the residents, indicating that staff could not yet reconcile the new procedural requirements with their caregiving practice.

CHAPTER 7: GENERAL DISCUSSION

7.1 THE PRINCIPAL SIGNIFICANCE OF FINDINGS

7.1.1 Introduction

Demographic changes and the infusion of new technologies are two influential social transformations in the twenty-first century. Population ageing has long been established in western nations, and in Australia it has entered public policy debates as “a public issue with consistent international face” (Gibson, 1998, p. 5). The perceived problems from local demographic changes in individual countries subsequently have become prominent on the global stage as population ageing become a worldwide phenomenon. The UN has subsequently assumed the position of arbitrator of global ageing policies, setting the stage for ageing and development. The MIPAA, for example, constitutes a global framework for the planning and application of policies in developed countries (Sidorenko & Walker, 2004). Just as population ageing creates and defines social realities, revolution in ICT also brings benefits which are not equally distributed, resulting in winners and losers in the transition to an information economy (Brink, 1997). Consequently, the twin challenges of ageing and technological revolutions are taking centre stage in both research and policy literature (Brink, 1997; Johnson, 1999; Sagaza, 2004; Severs, 1999; Sidorenko & Walker, 2004), and are contextualising the reform process in aged care policies.

The final discussion is organised into three parts. The first section will discuss the significance of the findings from the three papers, which have informed the research questions of this study. The second section will reflect on how the concepts of aged care, IT and sustainability are constructed and strengthened in a ‘matrix of ideas’ that revolve around the context of aged care (Hacking, 2000). The final section deals with the implications of the study and offers suggestions for future research. Ultimately, the study aims to contribute to the understanding of technology as a *social management technique* in the delivery of residential care services to older people. Therefore, sections 6.1.2 to 6.1.4 of the research questions will respectively examine the impact of using IT to socially manage i) population ageing, ii) residential care operations, and iii) care provision.

7.1.2 Research Question 1

What are the references to IT in the policy context of reforming the funding structure and delivery of aged care services?

This section discusses the findings of Journal Article 1 which explored the above stated research question. It is argued in the paper that IT is becoming an instrument of social policy with the prospect of managing population ageing. ICT is purported to reduce healthcare expenditure but at the same time, improve the quality of delivery of healthcare (Tan, 2004). The journal article highlights the role which IT has assumed in social policy through the macro-management of population ageing. The term ‘social policy’ essentially deals with social planning or “the formulation and implementation of economic, social, environmental, spatial and sectoral development strategies” in order to be better prepared to face emerging trends in politics, environment and technology (Bromley, 2003, p. 819). One of the salient features of social construction is the eminence of ‘globalisation’ (Rosamond, 1999), through the indication of the global experience of population ageing. The interweaving of globalisation in the policy documents exposes the aged care context to “an account of new properties of external structure” that poses questions about “the stability, usefulness, and viability of established practices” (Rosamond, 1999, p. 659). At this conjunction of changing circumstances, aged care policies are embracing new trends, which in turn shape planning at global, national and local levels (Journal Article 1).

The models and methods of planning in the social⁶ sector are informed by the demographics of the section of the population governed by the sector and by the strategies of manpower planning (Bromley, 2003, p. 823). In the aged care sector, the new realities come from the ageing of the population, and the perceived ‘crisis’ of intergenerational equity which is expected to occur as the baby boomer generation enters retirement age. Solutions to these issues are planned in reform processes, such as the last Aged Care Reform Strategy 1997 in Australia. The principle focus of this study is set in the context of this reform.

⁶ Using the social sectors approach to social planning, productive or economic sectors such as agriculture, mining, manufacturing, commerce, insurance, and real estate are treated separately from the social sectors such as health, education, criminal justice, and social services (Bromley, 2003, p. 823).

The analysis undertaken in the first article used rhetorical analysis of the discourse embodied in policy documents to point to the finding that long-term sustainability is “enacted as technology”⁷ in aged care policies (Journal Article 1). However, the inclusion of long-term sustainability as a policy objective for the ageing population does not contribute to the unpacking of the already clichéd term ‘sustainable’. The findings demonstrate that enacting sustainability as a technology is achieved through: i) constructing population ageing as a global phenomenon; ii) the promotion of ageing as a social justice issue that needs to be incorporated in a development framework; iii) the increasing demands for long-term solutions to population ageing, which require organisations to seek and establish collaborative approaches; and iv) convergence in philosophy, operational structure and technology which facilitates the collaboration and networking between organisations. Demographic shifts, increasing awareness of the rights of older people, and informational demands for planning of resources all create the logic for the use of IT to significantly push towards ‘sustainability’. Consequently, the definitive meanings of ‘IT for sustainability’ create the impetus for changing the modes of operation and the modes of service delivery, traversing all levels impacted by the policies.

The findings of Journal Article 1 put into perspective the impetus for change towards using IT in service provision, which is argued by some scholars as a technological imperative. While the existence of a particular technology in a social environment can trigger social changes, a counter argument of technological determinism posits that a technological solution is stabilised and mandated once the “relevant social groups” agreed on its potential benefits (Kline & Pinch, 1999, pp. 29-30). This counter-perspective falls under the broad definition of the ‘social construction’ or ‘social shaping’ of technology (Kline & Pinch, 1999; Pinch & Bijker, 1987). As such, the thesis adopts the confluence of these two theories through the establishment of a matrix. The matrix is employed as a grid in which ideas are developed (Hacking, 2000, pp. 10-14) such that discourse and practices obtain their meanings. The concept of a matrix has also appeared elsewhere, for example, in the work of sociologist Michel Foucault. Foucault described the four types of technologies—technologies of production, signification, power and the self—as “a matrix of practical reason” (Flew,

⁷ This idea was introduced in relation to liberal democracy by Albert Borgmann through his work *Technology and the Character of Contemporary Life* (1984).

2005, pp. 29-30). Therefore, this thesis draws upon the concept of a matrix since it is particularly useful for exploring broad-based issues such as technology and culture.

To understand how the social construction of meaning becomes embedded in the political context, the development of a matrix or a grid demonstrates where discourse and practices obtain their meanings. This matrix also lends itself to the understanding of the motive or rhetoric behind technological change. Following Stillar (1998), two similar components of x_1 and x_2 , namely IT, aged care policy, and long-term sustainability, are designated on a different axis. Through different juxtapositions, the identified agenda (as shown in the inner section of the matrix) can be mutually exclusive.

Figure 1: A matrix of meanings and motives of the discourse of reform in aged care

		X_2		
		Information Technology (IT)	Aged Care Policy (ACP)	Long-term Sustainability (LTS)
X_1	Information Technology (IT)		Cost-effectiveness Maximising productivity, facilitating integration, and standardising quality	Evidence-based The superiority of information for long-term planning and economising resources
	Aged Care Policy (ACP)	Continuous improvement In the quality of services for older people and access to quality services		Social Justice Protection of the rights of older people to have a balanced development plan
	Long-term Sustainability (LTS)	Long-term solutions Long-term, strategic solutions instead of technological quick fixes	Strategic planning Rationalising 'future' service provision in order to thrive in a competitive environment	

For instance, support for the integration of IT into aged care policy is determined on the agenda of cost-effectiveness. This can be seen in the iteration of cost-effectiveness as a policy objective in the use of clinical IT in aged care (*Clinical IT in Aged Care, Interim Report*, 2003). Hence, the aged care policy is defined by elements of IT such as maximising productivity, facilitating systems integration, and standardising quality, goals which arguably cannot be accomplished without the use of efficient technologies.

Proponents of sustainable development define the use of IT in terms of the development of long-term solutions, instead of technological quick-fixes which are ad hoc and unsustainable. Such concerns are already established in policy discourses such as in the discussion of the planning of resources for future sustainability by Dovers (2002) and Wheeler (2002). Sustainable resource planning is also related to an important concept of 'glocalization' (Abdullah, 1996; Hampton, 2002; "It's a glocal world," 2001; Peck & Yeung, 2003) which ties together the global and local dimensions. It is also popularised by the media advertising with the tag line: 'Think Global, Act Local' (Onkvisit & Shaw, 2002). The glocal perspective of aged care establishes the role of "an international organisation with set rules of procedure", demonstrating the horizontal governance approach by the UN ("It's a glocal world," 2001). Abdullah (1996) pointed out that the term glocal means that a perspective can be globally appropriate and culturally relevant, signifying an openness to new ideas while preserving one's culture.

The macro- or policy context of aged care revolves around the economic imperatives which align the impact of population ageing with a much transformed economic environment. Brink (1997) stated that IT fuels the transformations in the economy "making it global, information-based, and around-the-clock" (p. 7). That is why IT defines aged care policy in terms of cost-effectiveness and long-term sustainability towards evidence-based reporting: cost-effectiveness and evidence-based practice rely on manipulation of cost information and available evidence to manage long-term care. In addition, the changes in aged care policy and delivery also reflect a broader trend, that is,

[t]he trend towards digitisation, convergence and networking...associated with the emergence of an economic structure that is increasingly global and knowledge-based, that derives additional momentum from network

dynamics, that is increasingly based upon the products of the mind rather than the hand, and which is linked in distinctive ways to culture and creativity. (Flew, 2005, p. 224).

Therefore, the role of IT in the aged care context is delimited within an economic perspective and is challenged through a particular 'sustainable' idea of development in which technology will be used to strategise actions and promote social justice across the service system.

The "system of ideas" (Burke, cited in Blakesley, 2002, p. 173) within the matrix are the constructions based on a person's ideologies and political persuasion. They can function as a filter of our interpretations or what Burke called 'terministic screen' (Blakesley, 2002). Through a 'terministic screen', observations are enabled, such that the "the angle of approach we take to phenomena through our vocabulary sets limits on what observations are possible" (Blakesley, 2002, p. 95). From the terministic screens of cost-effectiveness, evidence-based, continuous improvement, social justice, long-term solutions, and strategic planning, the discourse of reform frames the experience and shapes logical response to these issues.

Another important observation is the range of terminology comprising the matrix. These terminologies can be seen as a representation of the multiple voices of stakeholders in a collaborative strategy led by the government. It mimics the concept of 'plurovocality' discussed by Gergen (2001). The policy documents play a significant role in persuading different sections of society to share the cost of aged care as these agendas in the matrix are mainstreamed. The multiple constructions of terminology depicted here are not exhaustive. They represent reform only policy agendas and therefore, obscure any other constructions of reality within the 'new' aged care context.

When combined with an analysis of rhetoric in text (Burke, 1969a; Stillar, 1998), the matrix developed in this study also supports an understanding of the rhetoric behind technological change. The use of the concept 'matrix' in this research also extends the complementary components of the analysis, for example, technology and social policy. This means that in a critical application of the matrix, social policies can be enacted as technology or technology can be enacted in social policies. Henman and Adler (2001;

2003), for example, discuss the role of IT in social policy that has created complexity in the processes through the application of IT for government risk management agendas. Their review also argues that such usage of technology has assisted the fragmentation of society since it employs technology to comply with conditions for monitor and survey (Henman, 2002; Henman & Adler, 2001).

7.1.3 Research Question 2

In what ways does the reform process propel the use of IT in aged care organisations?

The Aged Care Reform Strategy constitutes a sustained period of systematic changes in legislation and policy at federal level beginning in the late 1980s, which resulted in the introduction of the Aged Care Act in 1997 (Kendig & Duckett, 2001). Of particular interest to this study is the Aged Care Structural Reform, which was initiated to regulate quality and economic management in 1997 after a change in Federal Government. Ultimately these reforms are geared towards continuous improvements in the organisation and delivery of aged care services from the national, the state/region, down to the local level. As a result of the regard of the economic impact alongside the growing recognition of older people's rights, the policy context is being outlined by policy goals that promote efficiencies and equity, for example, i) *service integration*, in terms of a consolidated funding structure and flexibility in service delivery; ii) *service quality*, with regard to standardisation of quality and monitoring performance (accreditation); and iii) *access to services*, in terms of facilitating the access to services (meeting the information needs of the funding body and clients) and referrals to relevant services (links to other services and information sharing) to promote ageing in place. It is important to note that these concepts are shaped in an environment conducive to innovation and technological change, with IT set to prosper over the next decade (ABS, 2002). Therefore, IT essentially has a role to play and its role is not independent of the context in which it operates.

With diminishing resources and increasing pressures to improve service quality, aged care service providers can barely survive unless they consider the prospect of change, arguably, through integrating services to be more efficient and more competitive (Journal Article 2). Tan (cited in Tan, 2004) indicates that healthcare organisations in the US are responding to the broader trends at organisational levels towards:

- Increased scale
- Increased concentration, diversification, and specialization
- Increased linkages among healthcare service organizations
- An expanded role of government
- Increased managerial and consumer roles, but reduced professional influence
- Increased privatization and market orientation (p. 445).

This means that provider organisations will have to keep up with these emerging international trends and integrate their service system in order to remain competitive in the industry.

Similarly, based on the findings of journal article 2, continuous improvements in the service system through accreditation measures can create immense challenges for service providers, resulting in service integration and the use of IT. These challenges encapsulate the changing service environment facing aged care service providers, requiring board members and management executives to think of longer-term development plans, which in the context of this study, culminated in changing the structure of service delivery and the use of an electronic care documentation system (Journal Article 2). The findings of this study also mirror a trend in the healthcare industry in the United States in which health care organisations' internal environment was subjected to reengineering, downsizing and continued focus on quality improvement during the period 1993-2000 (Fottler & Malvey, 2004). In response, organisations are continuing with restructuring, creating delivery systems that are both owned and virtual, and competing on the basis of documented cost and quality (Fottler & Malvey, 2004).

Overt changes in policy configurations have also resulted in fundamental changes to organisational structures towards more centralised control of management, while reducing professional practice. As a case in point, direct care staff were involved in fulfilling managerial dimension of documenting performance. The documentation which direct care staff undertook to generate clinical evidence was found to reduce their hand-ons time with residents and, therefore, undermined their role as care professionals. Through systematic engagement with new work practices like electronic

care documentation, which focused on efficiency, the finding supports Tan's (2004) argument about the increase of managerial roles in the organisation.

7.1.4 Research Question 3

What are the meanings of IT with regard to its impact on the provision of services?

In the face of changing needs, preferences and lifestyles, aged care organisations are at the crossroads to provide technologically based services. The findings presented in this article demonstrate that the use of IT generally implies efficiency in an organisation. The effectiveness of a computer-based documentation system in the form of greater access to up-to-date information was regarded as a positive outcome in the workplace. However, efficiency was also found to affect the value and practices of care work. Even if the intended effects are strategic, the final outcome can be adversely affected based on what IT means, and how those meanings effectively define care (Journal Article 3).

The reform process extends the requirements for efficiency through RCS or a casemix funding tool, in which staff appraisal of the health and social needs of older people becomes important. Furthermore, previous research has shown that the threat of losing funding can turn the documentation of quality into a practice that has more to do with administrative requirements, rather than the improvement of the care provided to older people (Courtney, 1995). Therefore, the ideals of 'evidence-based practice', which were found on the basis of improving patient care through the best-available evidence (Webster et al., 2003) become subsumed by the concern for inbuilt cost-effective requirements that determine funding.

In the context of an information society and knowledge economy, technology produces familiarity, escapes reflection, and becomes rhetorical in what it actually means and what it can do to facilitate changes in the environment. Technology can be used to enhance the way we perform a task, for instance, enabling more efficient processes. This is not surprising because digital technologies are designed to blur the boundaries between human and artificial intelligence (Brown & Duguid, 2002; Nieuwenhuizen, 1997). For example, user-friendly technologies are indispensable in performing tasks, and do so without us knowing their presence. Yet the idea that IT can deliver efficiency creates the perception that this type of technology can be substituted

for every manually performed activity. In this situation, technology does not enhance our virtues as human beings; instead it eludes conflicting views and dictates the way we relate to the world. It is in this context that the role of IT in the aged care sector deserves attention.

From behind the façade of ideologically neutral and objective technology, IT does not emerge as something that we build through language and that, in turn, shapes the language we use to speak of it. In addition, the saliency of other disciplines in explaining the rhetorical features of technology does not necessarily inform the development of technology (see Houser, 1999), and therefore, advancing the gap between people who 'make' and 'use' technology. Yet, without importing the theoretical underpinnings from history, philosophy and sociology, the scientific background of IT does not encourage an understanding of the social construction of technology (Warner, 2000). Technology remains in our minds as machines. Hence, we buy into the promises that IT offers, provided it performs the role as an instrument to our objectives—for example, to manage and communicate information—without necessarily examining the costs of arriving at our goals.

Distributed access to information and resources shows the organisation of power enabled by IT. This distributed access to information contributes to the distributed discourse on technology in society (Holmes, Hosking, & Grieco, 2002). The problem lies in the fact that any technology we employ to achieve certain goals has both positive and negative consequences (Aungles, 1991; Jones, 1983; Nieuwenhuizen, 1997; Winner, 1986). Whereas the positives are readily accepted, the negative consequences of technology are more difficult to demonstrate because technological changes are as profound as they are swift (Aungles, 1991) and our enthusiasm for new ideas may distort strongly held values (Nieuwenhuizen, 1997; Winner, 1986). More importantly, as a result of political support for the positives, the burden of proof is not equally shouldered by both enthusiasts and critics of new technologies, but is shifted onto those who are cautious of technological progress (Winner, 1986).

7.1.5 Overall Findings

The introduction of IT in an organisation is a mode of inducing fundamental changes to the way services are provided. Indeed, the idea of IT as an enabling technology in service provision, which triggered this research, is a common theme across the research literature and policy statements. Underlying the premise of IT as an enabling technology are the competitive value of information and the modes of operation based on IT. New work practices are designed to enhance the production and manipulation of service information that entail desirable outcomes such as increased productivity, flexibility, and service quality. IT enables organisations to achieve those objectives through restructuring work processes, integrating coherent functions, and standardising the outputs. Nonetheless, what is more important is to question the logic behind the support for IT as was demonstrated in the organisation studied. Consequently, the significance of this study is in its examination of the “matrix” (Hacking, 2000, pp. 10-14) within which IT is construed to have a positive role to play not only in the current, but also in the future, provision of services for older people.

7.1.6 The Integration of Meanings of IT: A Concept Map

The matrix of meanings and motives of the discourse of reform in aged care, as shown in Figure 1.0, represent a concept map linking seemingly distinct themes to construct a changing age care context. By mapping out the interrelated themes, the study has shown that there is an ontological significance in how the themes from IT, aged care policy and long-term sustainability intersect semantically with one another. Effectively, the realities constructed in the macro-social domain make the reform process more palatable to various stakeholders and were used as a launch pad for the government’s agenda of ageing in place.

Ageing in place in this case study is depicted as a socially constructed entity set in a matrix comprising the multiple and competing discourses of the aged care reform agenda. The existence of a system of ideas means that there is more than one possibility within the context. As people are “neither absolutely identical nor absolutely divided” (Blakesley, 2002, p. 172) on the reform agenda, rhetoric becomes prominent. In this environment, a consensus is built around the use of technology to achieve cost-effectiveness, evidence-base, continuous improvement, social justice, long-term solutions and strategic planning. This is important because the implementation of

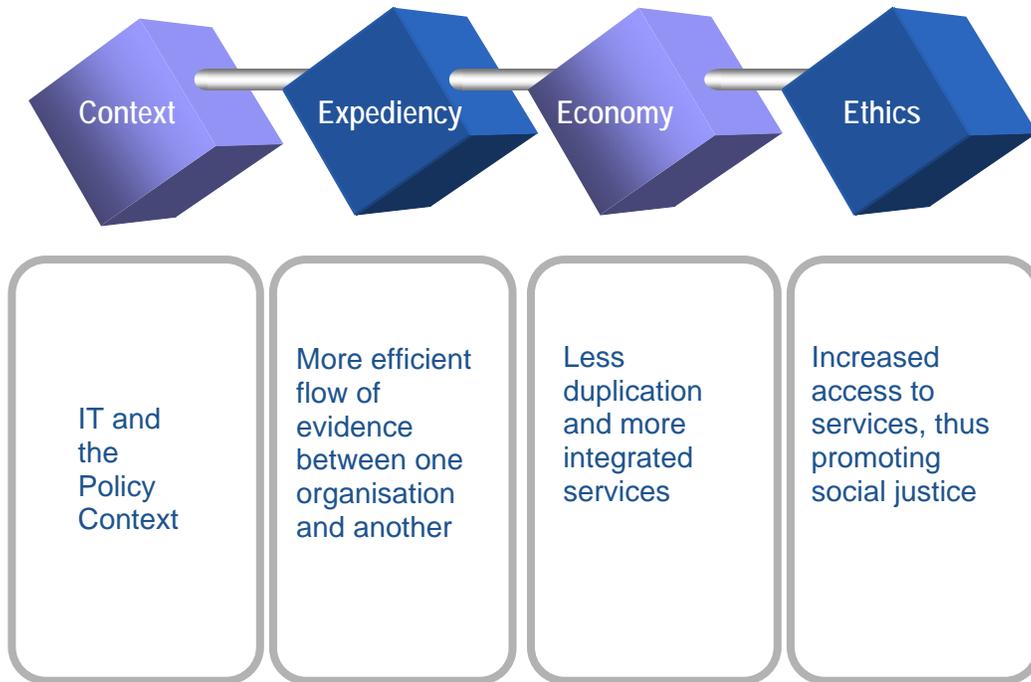
ageing in place requires a collaborative approach and coordination of roles and operations.

The focus on an integrated information technology system reflects the initiative for long-term sustainability. The first article focuses on integration, an issue that was a highlight in a United States study of multi-hospital systems (Fottler & Malvey, 2004), which demonstrated the changing feature of health-care provision. Fottler and Malvey (2004) argued that the hospital systems in the US, with varying arrangement and structures, have evolved into “organised or integrated health care delivery systems” which are capable of addressing the needs for healthcare across the continuum (p. 55). Similarly, the theme of ageing in place has pushed health and aged care providers to address the issue of continuity of care, especially in obtaining consistent support for clients/patients after being discharged from an acute setting within the hospital (Queensland Health, 1998). A salient aspect of the computer-based care documentation system is that it was part of an integrated information system introduced in the organisation.

Ageing in place has also become the impetus for the provider of aged care services studied for this thesis to restructure its service system to integrate state-wide multiple aged care services (for example, nursing homes, hostels, independent living units and others) under one board and one management. The findings demonstrate the changing of organisational life in terms of identities and leadership structures in the context as a result of the distributed nature of technology and the distributed access to technology (Holmes et al., 2002). This is relevant in the context of aged care due to the various levels of governance and accountability in the aged care system, which had been the context for service integration. Because IT can diffuse control regardless of physical and geographical boundaries, integration based on IT networks promises a centralised management. This is akin to an idea of enterprise governance where separate or subsidiary organisations are interconnected by a centralised hub (Bartlett & Ghoshal, 1989).

The results of the investigations of three levels outlined in the case study methodology can be synthesised to demonstrate core categories under integration, which IT facilitates. A summary of the emerging themes in the research is illustrated in the following diagrams.

Figure 2: Themes under integration - Macro-level categories

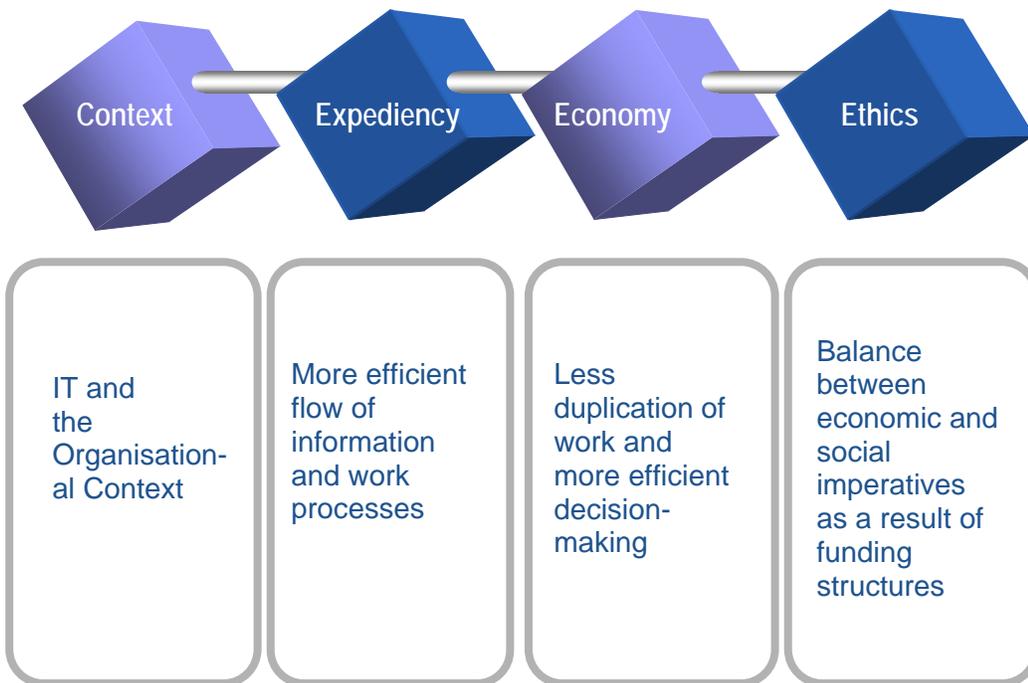


In the policy context, IT has connotations of expediency in references like ‘coordinated framework’ or ‘concerted effort’ between organisations. The process of collaboration is facilitated by IT through a more efficient flow of evidence, which points to the importance of management systems and information systems. The efficient flow of evidence is seen to impact on the economical use of resources through a seamless service system that can reduce the unnecessary cost of duplication. Nonetheless, policy integration could also mean centralisation of governance, but in the form of service networks, requiring inter-sectoral and whole-of-government approaches. The focus of integration is related to the agenda of sustainable service provision in health and aged care services in order to control spending.

The economic focus is toned down with the references of using technology to increase access to services and, therefore, promote social justice under the banner of

‘a society for all ages’. Interestingly, social justice denotes intergenerational equity, which can be applied to invoke a negative image of older people as a ‘burden’ on taxpayers.

Figure 3: Themes under integration - Meso-level categories



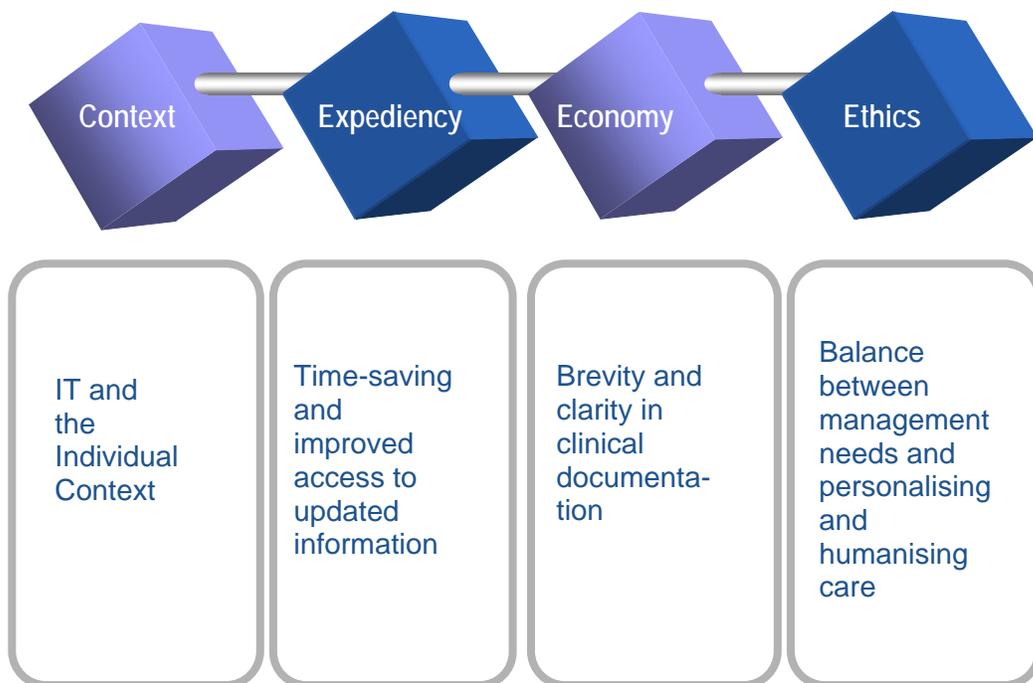
In the organisational context, IT denotes expediency when technology facilitates the flow of information and work processes. References to this particular notion of technology can be seen in the organisation’s (SSRC) strategies of consolidating the management and the service delivery system. This particular consolidation is similar to vertical integration which “increase[s] comprehensiveness and continuity of care, while simultaneously controlling the channels or demands for health care services” (Conrad & Dowling, cited in Fottler & Malvey, 2004, p. 66).

IT also has implications for the rationalisation of resources by giving the organisation an added advantage through an ‘integrated delivery system’ that can be monitored through technology. As depicted in the case study, the consolidation of the organisational structure is enabling systems integration through “unified ownership [which] allows for coordinated adaptations to changing environmental circumstances”

(Robinson & Casalino, cited in Fottler & Malvey, 2004, p. 66), which was referred to as 'new challenges' and 'competition'. Therefore, the use of the strategic plan provided the organisation with the capacity for regional governance through integration, represented by the singularity of control, direction, mission statement, hierarchy of authority and bottom line (Fottler & Malvey, 2004, pp. 66-67).

Ethical considerations of technology became prominent when the management had to negotiate the balance between economic and social imperatives as a result of a change in the philosophy and technologies of service provision. In this case, the philosophy of ageing in place had driven the management to explore innovative strategies of data management in order to comply with funding requirements. The process of change becomes crucial in sustaining the services to a group of older people who, under the current funding arrangement will not be reimbursed by the government. Therefore, IT is primarily a tool for funding and in the process has helped management to recover services for a portion of the residents.

Figure 4: Themes under integration: Micro-level categories



Within the individual context, IT has particular notions of expediency in staff comments on how electronic documentation saves them time and improves their access

to updated information. As computerisation was still unfamiliar to some staff, some of them also experienced stress from lack of control and time limitations from their patient load and dependency. The lack of control came from instances where there were interruptions from computer malfunction or network problems. Staff with greater patient loads and highly dependent patients who require constant or urgent attention expressed time limitations in finding and using the computer to document care. Therefore, technology would be an invaluable resource if it could provide quicker access to information for these time-pressured staff.

The notion of economy (rationalisation) has particular relevance to brevity and clarity of documentation. Due to the use of electronic forms in place of paper-forms, staff have to adhere to the word limit when typing in their progress notes. As a result, they also have to think clearly before logging their entry as there is more emphasis on being clear and concise. Efficiency and rationalisation of services seems to act as a counterforce to 'personalising and humanising care'. Ethical connotations are enacted in the negotiation of balance between spending time on addressing the information needs of the management and finding the occasions for more personalised care of residents. As a result, staff felt the balance could sometimes be tilted towards managing information, instead of managing the residents. In the same vein, negotiating 'balance' can also mean 'humanising' the information collected and entered into the computers. Expressions of 'balance' also imply incongruence between actions, practices and representations, relating to the problems of cognitive dissonance as discussed by Vaast and Walsham (2005).

7.2 IMPLICATIONS OF THIS STUDY

In this case study, it was found that the initial justification for structural change is that population ageing is going to have a significant economic impact. Aged care organisations in individual 'cottage-industry' style establishments will be running at a loss if they are uncompetitive and economically unsustainable. If it were to continue that way, the organisation would be unable to adapt to needs in the future and, therefore, services would eventually be lost. As reflected in the policies requiring organisations to be sustainable, aged care organisations have to change to be relevant in an era where economic, political and social transactions are increasingly centred on information (NOIE, 2002). The impetus provides a preference for the use of IT in the organisation.

That is, to make up for the loss in income, the organisation must now move towards long-term investment in IT to enable the fulfilment of the ideals highlighted in the matrix. Securing these ideals would be almost impossible without a good information system. As was the case of the organisation in this study, the upgrading of the quality of information was ultimately achieved through the use of IT.

7.2.1 The 'Future' of Aged Care Service Delivery is Integrated and Networked

The problem of integration is not new (Hudson, 2003; McCoy & Vila, 2002; Ott & Dicke, 2001). Governments have been trying to develop a one-stop-shop approach (Fine, 1997) that on the one hand, gives flexibility to clients, and on the other hand, reduces costly service overlaps. With environmental ethics assuming prominence in ecologically and socially sustainable management paradigms (Gladwin, Kennelly, & Krause, 1995), the debate on integration is renewed with the possibility of using IT to achieve integration. It is also clear that continuity in the pursuit of an integrated service system has been contextualised in the agenda of the reform in aged care services since the late 80s.

7.2.2 The 'Future' Depends on the 'Informational' (Castells, 1996) Competency of the Workforce

Substantial federal and state policies relating to the knowledge economy are also demanding of providers' planning of the workforce capability in entering the information age. The funding structure in the aged care sector has gradually changed from a uniform rate for nursing homes and hostels towards an integrated funding tool, called the RCS that does not differentiate between the two (Jeong & McMillan, 2003). The new funding structure is based on the specific 'dependency' categories assigned to the residents (Jeong & McMillan, 2003). As a result of the new funding structure, nursing home residents who used to attract a higher portion of funding from the government can be demoted to a new residential care classification with less funding. Accordingly, management has to shape its information system to address the requirements for evidence. Since funding is based on the specific needs of older people, the number of older people alone does not attract a corresponding amount of subsidy.

7.2.3 The Meaning of Technology Can Represent a Conflict to Care Practices

The meaning of IT and the dimensions within which it operates (refer Figure 1) not only force compliance with a particular technique of social management, but also seriously alter the “collective expression” (Miller, cited in Flew, 2005, p. 30) of the staff working in the field of aged care. Without selective appropriation of technology, through having the user in mind at the design stage, IT can pose problems for individuals who cannot reconcile their work with the technology. Therefore, the work that professionals do may be taken away from frontline service delivery under a managerial approach (Tan, 2004).

7.3 FUTURE RESEARCH

Since this research is an exploratory study in the context of aged care, it has not addressed the experiences of older residents at the care facility. This limitation is subject to the fact that the residential care facility was undergoing a transition in its structure and in the use of an electronic documentation system. Since staff are still making sense of the changes, the benefits of this new system would not have been fully realised for the residents whom they cared for. At the time of this study, there was also in-house evaluation of the new electronic documentation system which was not available during the data collection period. Therefore, further research is required to examine the impact of the electronic documentation system on older residents who are residing in the facility.

7.4 CONCLUSION

To recapitulate, this study has examined the social construction of IT as a tool for social management in three interrelated contexts: policy, organisational, and individual (staff). Evidenced from the discourse analysis on policy documents and the accounts of the providers of aged care services is that the experience in the aged care context is informed by international experiences and trends. However, the experience is also unique in terms of the care provided and the clients they serve. This study has contributed in a significant way through examining the three contexts of aged care which shape the services provided to older people. In addition, it has also provided insights into how the meaning of IT is constructed in the adoption and application of IT in a residential care organisation. Most importantly, by pointing out individual staff experiences with IT in their care work, this study calls for a reflective use of IT which

keeps sight of the ethical dimension of care when the technical and social domains of care intersect.

APPENDICES

APPENDIX 1: LETTER TO PARTICIPATING ORGANISATION

APPENDIX 2: INFORMATION SHEET OF THE CASE STUDY

APPENDIX 3: CONSENT FORM

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APPENDIX 3: CONSENT FORM

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CONSENT FORM

Researcher: Rahimah Ibrahim, Ms (Phone: 3864 4758)
Supervisor: Dr. Laurie Buys (QUT)
Dr. Karen Barnett (Education Qld)

Postal Address: Centre for Social Change Research, School of
Humanities and Human Services, QUT Carseldine,
Level 3 E Block, Carseldine Q4034

Title of study: An ecological analysis of the conceptions and
translations of the enabling repertoire of
information technology (IT) in Queensland aged
care strategy

If you are interested in this study, please read the attached information sheet for basic information regarding the project named above. If you agree to participate, please proceed to the checklist below and fill in the information required and provide your signature on this page.

By signing below, you are indicating that you:

- have read and understood the information sheet about this project;
- have had any questions answered to your satisfaction;
- understand that if you have any additional questions, you can contact the research team;
- understand that you are free to withdraw at any time, without comment or penalty;
- understand that you can contact the researcher or the supervisor if you have any questions regarding the project, or the Secretary of the University Human Research Ethics Committee on 3864 2340 if you have concerns about the ethical conduct of the project; and
- agree to participate in the project.

Name: _____

Signature: _____

Date: _____/_____/_____

20 February 2004

Masonic Aged Care Queensland
60 Wakefield Street
SANDGATE Q 4017
(Attn: All staff members)

To Whom It May Concern:

My name is Rahimah Ibrahim and I am on a training scholarship with the Malaysian Government. Currently, I am in a doctoral program at the Queensland University of Technology.

I am hoping that you would be interested in participating in a research project to gauge Aged Care staff's understanding of the meaning of information technology (IT). I am sure you have heard something somewhere about this useful tool and have seen or used the things that are regarded as IT. A computer, as you would have guessed, is one of the physical parts of this technology. Other things can include programs such as word processing, spreadsheet, e-mail and the Internet.

I understand that some staff members have high regard for IT, and others are not particularly interested in it. What makes you think so? That is the question that I am seeking to answer in my research project.

Attached is an information package containing the description of the research project and a consent form.

If you are keen to participate, please sign the consent form and indicate the preferred time for the interview (on the sign up sheet). Please return the form to reception desk of the nursing home, by the 10st of March to be collected by the researcher. If you need to change the time, please contact me at 3864 4577.

I look forward to our meeting and sharing of ideas.

Sincerely,

Rahimah Ibrahim

Title of research project:

An ecological analysis of the conceptions and translations of the enabling repertoire of information technology (IT) in Queensland aged care strategy

Chief investigator:

Rahimah Ibrahim

Address:

Centre for Social Change Research, Level 3, E Block, Queensland University of Technology (QUT), Carseldine Campus, Beams Road, CARSELDINE QLD 4034

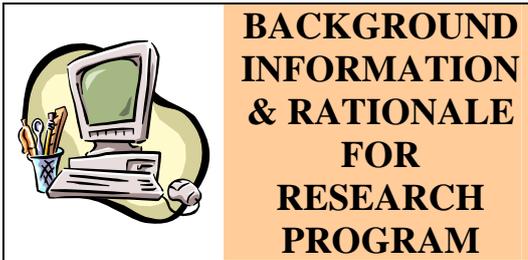
Phone number:

3864 4758 or 3864 4577

Research program information	This research program is the basis of a doctoral dissertation to qualify for the Doctor of Philosophy degree at QUT. This study will be performed by Rahimah Ibrahim under the guidance of Dr. Laurie Buys (principal supervisor, QUT) and Dr. Karen Barnett (associate supervisor, Education Queensland).
Description of program	This research aims to describe the meaning of IT as an enabling technology as experienced by staff members of residential aged care facilities. The case studies are part of the overall research to explore what IT means in Australian aged care setting.
Nature of participation	<p>Your involvement in the research program would include:</p> <ul style="list-style-type: none"> • Reading and understanding this information pack, • Giving your written consent for participating in the research, • Negotiating time and place for the interview by chief investigator, • Giving your verbal consent for taping the interview, • Participating in an interview session regarding your views and experience of using IT in the workplace. The interview session will take approximately half to one hour.
Expected outcomes	<p>As your workplace is chosen in this study for its wide range of aged care services, particular research findings will be more meaningful in this context compared to other kinds of human services. Therefore, when this information is made available, it would provide specific benefits to your organisation such as in research and development.</p>
Expected benefit	<p>Possible benefits include:</p> <ul style="list-style-type: none"> • Increased understanding of the meaning of technology by staff members, • A multitude of in-depth feedback from staff members may portray a clearer picture of how they regard IT, • Findings from this study may also be used to encourage ways of enhancing service provision, • The case studies will provide an insight into the viability of IT in aged care services in the future.

Risks	No known risks have been identified as a result of participating in this study.
Confidentiality of the data	<p>Management of confidential information will include the following:</p> <ul style="list-style-type: none"> • All information supplied by participants will be treated with confidence. • Audio taping of the interview is subject to participants' consent and full access to tapes and transcriptions is restricted to the researcher and her supervisors. • Confidential records will be secured in a locked filing cabinet in a room with restricted entry (using QUT Id card and swipe access). • Computer files of the transcription will be limited to the researcher and her supervisors on a password-protected computer. • Findings from this study will only include analysed data, any identifiable information of individual participants will be removed.
Voluntary participation	All persons agreeing to participate will be asked to sign a consent form outlining their rights to dignity, privacy, confidentiality and the right to withdraw from the research. Participants can withdraw at any time during the course of investigation without any negative consequences or penalty.
Questions or concerns/ Complaints	Any questions, concerns or complaints regarding the research can be directed to Rahimah Ibrahim (office phone: 3864 4758) and/or her supervisors at the above address. Concerns or complaints about the ethical conduct can also be forwarded to QUT Research Ethics Officer on 3864 2340 or ethicscontact@qut.edu.au .

THANK YOU FOR YOUR INTEREST IN THIS PROJECT



Since the beginning of computers, we have discovered a whole new world of information and communication technology (also known as IT and later, ICT). The saying goes that the whole world has now become local with these new technologies. Our ordinary lives are remarkably transformed just like when we first knew electricity. Technologies of information and communication now become the ‘electricity’ of our actions and relations with others. In other words, latest innovations of IT are now becoming the medium that feeds us with information to support our actions. This technology also hooks us up with others on its ‘digital network’ and makes the world accessible on a single mouse click.

Unfamiliar concepts such as IT, computers, website, email, network, and others are made ‘at home’ as we become more comfortable with these new ideas. These technologies also have significant impact in the workplace, changing the way we work and how we work with others. The effects of technology very much depends on what we make of it, and how we apply or use it^[1]. The possibilities are endless, and so are the impacts. The only way to realise that technology is not just tools and machinery is to examine the social aspect, like the language we use to describe it.

Language and symbols are central to this change that we have been experiencing. Our views also feed on what we read, what we hear, and what we learn from our environment. Since technology is very much created by humans and shaped by the ideas of the society, the language we use to represent a particular thing, idea, or technique will change the way we think, act, and relate to others. That is why a simple concept such as IT and the whole idea related to this concept transforms social practices. Social practices, in this regard, include activities, people and their social relations, instruments, objects, time and place, forms of consciousness, values, and discourse^[2]. As such, technology is not merely tools, but it also includes our knowledge and application of specific techniques to achieve social goals. These social objectives are strengthened when we talk about things, people or ideas.

Over the years, we have heard references to IT and the one that is of interest to this research project is the concept of ‘IT as an enabling technology’. People refer to IT as enabling efficient and integrated services^[1, 3], collaboration between staff and agencies, accountability, and greater freedom for clients and service providers^[4]. Rather than focusing on these notions, I would like service providers to share their day-to-day experience of what it means to have been ‘enabled’ by IT. These hands-on accounts will contribute to the understanding of what IT means to the provision of

services and the aged care community.

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