**CHAPTER 2**

**REVIEW OF RELATED LITERATURE AND STUDIES**

*This chapter presents the review of related literature and studies from both local and foreign sources, articles, forums and other knowledge bases about the study and the overall synthesis.*

**I. Related Literature**

1. **Foreign**

‘Although at first sight it might seem fairly straight-forward to devise intervention programmes to train parents and teachers in appropriate modes of responding, this has proven to be far from straight-forward and not particularly successful.’

The above quote is an excerpt from a report by Collis and Lewis (1997) in which the authors conclude that it is very hard for a sighted individual to identify with the needs and problems faced by a blind or partially-sighted person. Their report focuses on assistance for children, but the above assertion’s basic premise is applicable across all ages of people experiencing sight loss.

The ability to ‘see’ is taken for granted by many. The environment surrounding us is a rich source of visual ‘cues’ which we have learnt since childhood to ‘read’ to enable us to go about our everyday lives. However, partially sighted and blind individuals must learn to adapt their behaviours to live in a world designed by sighted people.

The opening quote sets a rather pessimistic tone; however, it is clear that the majority of those with sight loss do learn to adjust to living in the ‘sighted world’ satisfactorily over time. (Gillman et al.,1986; Kaarlela, 1978; Kleinschmidt, 1995). For the purpose of this report, ‘needs’ will be defined as: “the lack of appropriate information (to include awareness of eye conditions and the person’s circumstances, access to services, and knowledge of available assistance) on which to base choices which could lead to benefits or services which may improve a person’s well-being” (Tester, 1992). This report aims to determine the key needs through evidence-based research arising from experiences of blind and partially sighted individuals in order to be better able to make the sighted world more accessible to, and support, such individuals and give a more optimistic outlook than Collis and Lewis in 1997.

In a report by Royal National Institute for the Blind (RNIB) in 2001, it is estimated that up to two million people in the UK have sight problems. Research published in 2005 indicates that this figure has not changed (Tate et al., 2005). The Department of Health (DoH, 2003) reports that between 1982 and 2003 there was an increase in those individuals registered as blind from 45,000 to 157,000. At the end of March 2006, individuals registered with sight loss had risen still further to just over 360,000 people, but this includes an increase in the number of people registered as partially sighted. In 2001, RNIB reported that of the estimated individuals with irreparable sight difficulties, 90% were over the age of 60. (However, it should be noted that there is considerably more evidence for people aged 75 and above in this context compared to those below the age of 65.)

There are a huge variety of causes of partial sightedness and blindness. The onset of sight loss can appear at any point in a person’s life, although most people are not born blind (Fitzgerald, 1970). Additionally, the progression of sight loss can be a slow process, deteriorating over time, or it can happen very rapidly. In a study by Fitzgerald, Ebert, and Chambers (1987) looking at 66 adults Londoners aged 21-65 years, three fifths of their subjects had less than a year between onset of symptoms and loss of useful vision, with 35% becoming blind in less than two weeks. Despite the small number of people involved in the study, it demonstrates how quickly visual acuity can decline. However, it should be noted that the process is gradual most of the time. Most of the evidence for deterioration focuses on older people with various eye conditions in which the loss of sight has been a slow process. An analysis conducted by the Office of National Statistics between 1990 and 1991 found that the main causes of blindness in older people was the “degeneration of the macula and posterior pole”, followed by glaucoma, diabetic retinopathy, optic atrophy and cataracts. Causes for partial sightedness were found to be similar. Predominantly, these causes are linked to older adults (Evans, 1995). More specifically, Evans et al. (2002) measured the prevalence of blindness and partial sight in a large representative sample (over 14,000 participants) of older adults aged 75 and over. The range of sight problems across all age groups varies greatly and likewise the experiences and needs will be diverse. For example, increased fragility and likelihood of additional illnesses in older people means that their physical needs, and the assistance they will require, will differ from younger people. Likewise, where children are diagnosed as partially sighted or blind, the parents will require support and guidance and extra equipment, i.e. to aid schooling, will be required, especially if the child has additional disabilities, which could compound their sight difficulty.

Personal and Social Needs and Experiences

The social relationships we have and support networks we build are vital to our well-being (Liang, Krause, & Bennett, 2001). These become of particular importance in helping the adaptation process when dealing with a chronic sensory impairment (Wang & Boerner, 2008). Reactions to a sensory loss, especially sight, resembles reactions to bereavements: people grieve for the loss of something which is part of the inner being (Sharpe, 2002; Percival and Hanson, 2005). In particular, in the short term, people appear to pine for the loss of vision, lamenting that they cannot do certain activities they used to do, i.e. reading, which manifests into anxiety and tearfulness (Douglas, Corcoran, and Pavey, 2006). Later in the ‘grieving process’, this can develop into depression. When social and personal support is not present, this depression can escalate (Fitzgerald and Parkes, 1998). The Network 1000 study shows that a significant number of registered blind and partially sighted people live on their own or are widowed (between forty-two to forty-five per cent), especially in the older age groups (Douglas, Corcoran, and Pavey, 2006). It would appear that a lack of emotional support can have significant personal adverse effects. Loss of sight and the process of learning to adapt is likely to impact upon the social relationships and personal perceptions an individual has of themselves. From articles reviewed here, a key need (that has arisen) is that of suitable social support which helps to strengthen personal attitudes and can encourage increasing self-esteem and the resolve to become more self-sufficient, e.g. knowing that it is possible to prepare your own meal (Fitzgerald, 1970; Scott, 1995).

**II. Related Studies**

1. **Foreign**

In the journal made by Rachel Harrison et al. (2013), advances in mobile technology have enabled a wide range of applications to be developed that can be used by people on the move. Developers sometimes overlook the fact that users will want to interact with such devices while on the move. Small screen sizes, limited connectivity, high power consumption rates and limited input modalities are just some of the issues that arise when designing for small, portable devices. One of the biggest issues is the context in which they are used. As these devices are designed to enable users to use them while mobile, the impact that the use of these devices has on the mobility of the user is a critical factor to the success or failure of the application.

Seeking for the solutions for giving people who are visually impaired, a student from University of Middlesex has been made. That says, ‘This guide makes no attempt to be exhaustive. Not only is every teaching situation and learning environment different, but each visually impaired student is unique. We have also refrained from being too prescriptive – we do not pretend to know all the answers, or to be able to provide the best advice for each and every situation, or each and every student.’ (Ifan Shepherd, 2001)

According to the study, Challenges Among Individuals with Visual Impairment in an Institution of Higher Learning in Malaysia (Loh Sau Cheong, Haslee Sharil Lim Abdullah, Farrah Dina Yusop and Ahmad Shamsuri Muhamad, 2012), it has been found that almost all of the materials used by the lecturers are not available in Braille. Students with visual impairments are required to seek assistance from volunteers to be their readers to translate the written notes into Braille. They found themselves restricted especially when there is a shortage of volunteer readers. However, the library has been supportive in helping the students to recruit volunteer readers.

According to Khoo (1998), the lack of textbooks and reference materials as well as the difficulties in obtaining them are among the most challenging barriers faced by individuals with visual impairment. However, this challenge is overcome with the recently introduced technology where brand new books can be scanned and converted into Braille. However, it is quite time consuming and costly. The visually-impaired students have to be very selective in this as some textbooks are changed quite frequently.

As the researchers have found the challenges of Visually Impaired people regarding Mobility on Campus, students with visual impairment are placed in a particular residential college in the university. A special van is provided to transport them from the residential colleges to their respective faculties for lectures. They may also depend on their friends for assistance in commuting from one place to another.

Visually impaired individuals traditionally relied on the assistance and good will of others for their everyday needs. This was due to the lack of basic accessibility affordances when carrying out many daily life activities. Travelling alone was hard or even dangerous due to the lack of carefully constructed sidewalks, or due to the inaccessibility of public transport, which lacked any form of audio announcements [6]. This fact made venturing outside one’s familiar place of living to be only undertaken by the truly adventurous of visually impaired individuals. Meanwhile, finding one’s way in unknown buildings was impossible due to the lack of Braille signage on building doors and elevators, in addition to the deficiencies present in safety regulations. This further exacerbated the mobility difficulties experienced by such individuals solidifying their social isolation. Any written form of communication was off-limits to blind individuals and barely usable by partially sighted people, a fact which was detrimental to the education of this segment of the population. (Nektarios Paisios, 2012) It was given that in the study made by Nektarios about Mobile Accessibility Tools for the Visually Impaired, limits within the objects with texts are seen.