

Braille and the Need to Innovate for the Blind

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It's been almost 200 years since Louis Braille—who lost his vision as a child—invented the tactile writing system that is now used all over the world. This 6-cell dot system allows blind individuals to read (and write) by feeling symbols on a page. Braille is available for more than 120 languages and has become a powerful means by which the blind achieve independent living.

Recent estimates suggest that there are currently 217 million people worldwide who are visually disabled and 36 million who are blind. Thirty-three percent of the latter reside in South Asia, 17% in East Asia and about 10% in Southeast Asia; and 86% of them are over the age of 50.¹ About 33% of them suffer from cataract and 42% from uncorrected refractive error.² These are potentially easily reversible conditions and access to care seems to be the main limitation for these conditions. The main initiative of the World Health Organization (WHO) is the elimination of avoidable blindness (which makes up 80% of blindness). That leaves 8 million blind whose conditions are not easily reversed.

Contrary to popular belief, blindness is not about living in total darkness. The WHO defines blindness as vision worse than 3/60 or a visual field of less than 10 degrees.³ The United States' definition of legal blindness is vision worse than 6/60 and/or a visual field of less than 20 degrees.⁴ Whichever definition is applied, at least 2 things are certain. First, although there is a spectrum of disability within the definition of blindness, there is no doubting the severity of the disability. Second, helping the blind to achieve independence requires a multipronged and very often, an individualised approach.

A systematic approach to helping the blind and visually impaired achieve independence requires at least 3 elements: 1) tools and techniques; 2) policies and plans; and 3) social and psychological support.

Tools and Techniques

Louis Braille adapted a system of tactile writing that had been developed by Charles Barbier—who had devised

this at the instruction of Napoleon Bonaparte—as a means for soldiers to communicate silently in the dark. In like manner, inventors of the current day are adapting mobile phone and global positioning system (GPS) technology to enable the blind to navigate safely, and using camera and optical reading technology to help the blind to read. One must not neglect to mention traditional aids like the white cane and guide dogs that make it possible for the blind to achieve independence in mobility. In addition, many useful techniques have been developed and deployed by occupational therapists and others to help the blind adapt.

Policies and Plans

Some of the barriers facing the blind are not solved by tools and techniques. Advocacy, organisation and legislation go a long way. Good examples of these are: requiring documents and labels to be available in Braille; giving due consideration for the blind and other handicapped individuals when planning public spaces and building access; providing funding for the handicapped and to agencies that aid the handicapped; and policies to include the blind and visually handicapped in the workplace to prevent discrimination.

Social and Psychological Support

Despite the availability of tools, techniques, infrastructure and legislation, one major barrier to independent living for the blind is reluctance on the part of individuals and/or their immediate caregivers to avail themselves to the opportunities. Breaking down the social stigma, debunking myths, educating, providing counselling, befriending—all these are important.

Louis Braille and many other remarkable individuals demonstrate for us the amazing capacity for those with a handicap to rise above their disability. That they are able to achieve independence in daily activities and rise above limitations to contribute to society is an encouragement to all.

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