

Identification of the Key Considerations to Design Assistive Tools for Blind Lottery Sellers in Sri Lanka

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Abstract – Without the gift of sight, they bravely and independently navigate life, demonstrating that real vision is beyond what the human eye can see. The highest percentage of people with disabilities are visually impaired, making it one of the most prevalent disabilities in the world (World Health Organisation, 2023). According to a study conducted by the International Agency for the Prevention of Blindness and Sri Lanka's Vision-2020 project, 15.4% of people were blind (Wickramaarachchi, et al., 2023). With their challenges, people with visual impairments are essential to society, making contributions in a variety of sectors and enhancing communities through their abilities and endurance. To create a society that is inclusive and where everyone has an opportunity to succeed, it is essential to recognize their contributions and respond to their particular needs. In Sri Lanka, just a small number of visually impaired people get to higher education, and they face significant challenges in their goals of education which limits their access to steady, well-paying jobs in the public or private sectors. Due to this circumstance, the majority—roughly 60–70%—have turned to self-employment as a source of income (Suraweera, et al., 2021). This study examines the particular challenges experienced by blind lottery sellers in Sri Lanka, namely in the Colombo District, where lack of specialised assistance and urban congestion makes it more difficult for the blind. According to self-observations, the blind population in Sri Lanka most frequently engages in self-employment through lottery selling, which offers a sustainable source of income. It was also observed that Colombo has the largest number of blind lottery sellers, which reflects a notable trend in the district. This study highlights the necessity of removing specific barriers to enhance these sellers' economic stability, efficiency, and safety. The lottery sellers who live in the Colombo district were the main sample group of this research. To collect factual data, grounded theory was applied as the main data collection method in this research to investigate the difficulties faced by blind lottery sellers. Apart from that, the self-observations provided a preliminary insight into the daily difficulties faced by these sellers, while the questionnaires gathered participant feedback and personal reports during the sample group discussions. To better understand their daily life, this study was conducted comprehensively by concerning the psychological, physiological, social, and economic elements that affect the stability and well-being of blind lottery sellers. These methods provide insightful information on the various issues faced by sellers, highlighting the specific way in which these aspects impact their everyday lives and workspaces. One of the main issues noted was the need for risky navigating in crowded places, which

puts blind lottery sellers at serious risk as they navigate crowded streets without support. This increases their risk of accidents and adds significant physical and psychological strain to their daily routine. Furthermore, financial exploitation is a serious issue as some sellers may be manipulated by unethical individuals who depend on their blindness, leading to unequal transactions or lost revenue. Their job is made more difficult by social stigma, as common misunderstandings about blindness result in discrimination and isolation from society, which affects their confidence and customer relations. Finally, everyday activities that are simple for sighted people, including handling lottery tickets and cash, become difficult. Blind lottery sellers must constantly fight difficulties to maintain their incomes because of these issues, which emphasises the need for focused assistance to improve their safety, independence, and financial stability.

To improve the efficiency, safety, and independence of blind lottery sellers, this study highlights the urgent need for assistive design solutions. It became clear from the interviews and observations that these people need specialised gadgets for safety, lottery and money management, and navigation to assist their employment. According to data analysis, this research revealed that to empower blind sellers, effective assistive technologies could address several important issues. Encouraging independence and dignity by giving blind sellers the tools they need to do their work with little help from others or need for sympathy, enhancing mobility and safety by adding lightweight weather covers to provide comfort and weather protection, as well as accessible navigational aids that lower the chance of accidents in crowded places., reducing theft risk by implementing mechanisms that provide transaction confirmation and fair pricing verification, are increasing sellers' trust in financial dealings, enhancing money management and lottery handling by the development of specialised wallets, lottery holders, or devices that enable safe cash and lottery handling. These innovations would allow individuals to keep one hand free for using a white cane to navigate, improving independence and convenience. By focusing on these particular areas, assistive technologies and equipment enhance blind lottery sellers' ability to carry out their jobs safely and freely while also enhancing their financial security, dignity, and general quality of life.

Keywords: *Blind, lottery sellers, assistive technology, visual impairment, disable, self-employment*



Fig.1 - Customer Communication and Service Approaches (Source: Author Creation)



Fig.1 - Methods for Money Identification and Lottery Detection (Source: Author Creation)

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