ABSTRACT

This research aims to design a new testing method, Visually Impaired Assistive Technology Questionnaire (VIAT-Q), to assess the usability and effectiveness of Assistive Technology for individuals with visual impairment. VIAT-Q was designed through two iterations of Design Thinking and Usability Testing with 52 participants. The questionnaire consists of 10 statement items covering aspects of ease of use, comfort level, independence, safety, and efficiency. Validity and reliability tests showed that VIAT-Q is a valid and reliable evaluation instrument, with high Cronbach's Alpha values (0.924 and 0.860) and significant correlations among the items. The survey also successfully collected data on the use of assistive technology by people with visual impairments, providing developers, researchers, and users themselves with a good understanding. VIAT-Q can become a common assessment instrument in the field of assistive technology and will contribute to the creation of better, user-focused AT solutions. This research provides a basis for future studies to further develop this questionnaire to cover other areas of interest and to develop a normative database that allows easy comparison and benchmarking of AT outcomes.

Keywords— Usability Testing, visually impaired, Assistive Technology, System Usability Scale, SUPR-Q