A FRAMEWORK FOR THE ENHANCEMENT OF HUMAN COMPUTER INTERACTION FOR THE LIMBLESS PERSONS USING INTELLIGENT AND ADAPTIVE USER INTERFACES

V. Okeyo, S. Kimani and G. Okeyo
Jomo Kenyatta University of Agriculture and Technology
Email: *vicky.jkuatnakuru@gmail.com*

Abstract
Effective interfaces and interaction styles play a major role towards mass and massive adoption of technology. Recent Human Computer Interaction research work is concerned with tasks, shared understanding, justifications, and argumentation about actions and not just interfaces. The new essential challenges are improving the way people use computers to work, think, communicate, learn, observe, decide, calculate, simulate, and design. Focus is limbless persons where it is estimated that 600 million people in the world have a disability of one form or another. In Kenya, 4.6M of Kenyans experience some form of disability. Many persons with disability cite experiencing discrimination when trying to interact with computers. The goal of this paper is to develop a framework that enhances human computer interaction through the use of intelligent and adaptive user interfaces along with its associated components. Attention was also given to interaction styles enriched with good expression capabilities and natural characteristics to achieve higher user acceptance, usability and satisfaction level. Data was collected from two sets of respondents; the limbless user and the trainer. Experimental design was employed to collect data from the respondents. To analyze data, an appropriate computer software package was employed and summaries analyzed and graphs drawn. Findings and information from the study can help in coming up with a framework and add to the field of knowledge that is in intelligent and adaptive user interfaces. This research aimed at stressing that for intelligent and adaptive user interfaces to be widely accepted, interactivity must be ensured and enforced at all times and that users must have confidence in the interface.