Mobile Interface Design: A comparative Study on Challenges & Usability Strategies Among Generations

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ABSTRACT
User Interface Design plays a vital role in technology innovation process for enhancing the technical complexity of products as per the end user requirements. The success of any technological outcomes mainly depends on the user experience i.e. how the end user interprets the product. During the designing phase, a systematic approach is required for ensuring the optimal performance and usability with respect to the user interface design. This study identifies the factors and challenges related to mobile phone software interface design for the elder generation, along with a comparative study with the younger generations. The results will prove to be helpful for the designers and developers of the mobile phones; by revealing of usability problems faced by elder generations and then comparing the acceptance level of elder and younger generation with respect to technological innovations. The questionnaire technique was selected, for collecting the requirements from the end user’s generations. The findings will help to develop guidelines for designing the software interface, by selecting different display modes. Lastly, usability and acceptance testing was conducted to validate the design interface.

CONCLUSION
The main aim of this work is to identify the elderly people needs and requirements regarding the mobile phone software interface as well as their usability issues and satisfaction level. Extensive literature review is done to know what the problems of elderly with mobile phone software interface and existing services provided by software interface design. It has been seen that there are number of issues related with the design of the mobile phone software interface. The main challenges that some of the elderly generation face with the mobile phone software are: Organization of the information on the screen, data display & color coding, hieratical menus& screen navigation, and icons, labels& symbols design etc. Questionnaires analysis showed that results concerning the Display, Ease of use, Ease of Learning, Usefulness and problem solving and Minimum Memory Load Criteria of Mobile phone Software interface. Some recommendations for new GUI of Mobile phone Software Interface are presented and usability problems were also discussed.

RECOMMENDATION
The developers should follow following recommendations that might be helpful in designing the software user interface of mobile phone for elderly people. These recommendations are mainly based on the literature review, findings of questionnaire results, and comments of elder people during questionnaires conductions, low fidelity prototype designing and testing.
• Avoid using different type of the fonts and use large font size.
• Avoid use of abbreviations and exceptionally bright, fluorescent or vibrant colors.
• Clear and consistent navigation mechanisms should be provided.
• Minimize irrelevant information on screen.
• Clear organization of information and use simple symbols with few colors and details.
• Provide the user facility to switch between different modes.

FUTURE SCOPE
We believe that the recommendations given might be helpful in designing and developing the software user interface of mobile phone for elderly people. Some more suggestions for future research can be explained, based on the findings. The future work is needed in the area to develop the high fidelity prototype using the iterative approach, fix those outcomes. Furthermore, it is required to deploy interface on the mobile phone and test from the actual user because user center design acquire the actual user requirements.
related to the interface. Thinking-Out-Loud protocol can be used to test the high fidelity prototype from the end user because for diagnostic or exploratory purposes, as it provides the additional information about the user perceptions.

FUTURE SCOPE

REFERENCES