

Design Quality Criteria for Smartphone Applications Interface and its Impact on User Experience and Usability

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Abstract:

The ease of use of smartphone applications makes using them quite joyful because they are an essential part of our modern lifestyle and have a big impact on our day-to-day activities. A computer program or software application that is specifically made to run on a mobile device, such as a phone or tablet, is called a mobile application. User interface (UI) and User Experience (UX) design principles are used to create the program and evaluate its quality. This research discusses the new UI/UX design concepts for mobile applications to explain their characteristics and their effects on improving the quality of the User interface (UI) and User Experience (UX).

The purpose of this research is to explain the features of the new UI/UX design principles for mobile applications and their effects on enhancing the quality of the applications and users' satisfaction with these applications that are designed based on these new principles. Applying these new design Criteria into practice.

Design/methodology/approach: the researcher uses a descriptive method for collecting data and applying quantitative methodology through a questionnaire as a tool applied on a sample of three categories of mobile applications, (Bank app, Shopping app, Mobile network app) to exam the results of the research.

Findings: Quality design criteria of mobile apps can positively impact user experience. Prioritizing usability, visual design, performance, accessibility, and personalization can create a user-centered design that meets users' needs. Such apps are easy to use, visually appealing, fast, accessible, and personalized, leading to improved user satisfaction.

Originality/value these applications needs graphic analysis in terms of aesthetics and the compatibility of the interface with the design identity and its uses. This study is a serious contribution to develop the skills and experiences of designers in the graphic design field.

Keywords :

Mobile applications, UX, UI, Smartphones, usability, User experience, user interface, Design quality

References :

- 1- (ISO-9241). (n.d.).
- 2- [Yong, T. (2013). User Experience Evaluation Methods for Mobile Devices. Faculty of Computing and Informatics. IEEE].
- 3- A., Yazid M. and Jantan. (2017). User experience design (UXD) of mobile application:An implementation of a case study, journal of telecommunication, Electric and computer engineering, Vol. 9, pp. 197-200.
- 4- Arhippainen, L. T. (2006). Empirical Evaluation of User Experience in Two Adaptive Mobile Application Prototypes. University of Oulu - ACM.
- 5- Baktha K. (2017). Mobile Applications Development: All the Steps and Guidelines for successful Creation of Mobile App: Case Study. International Journal of Computer Science and Mobile Computing, Vol. 6, 15-20.
- 6- Brynjolfsson, E. a. (2014). The second machine age: Work, progress, and prosperity in a time of brilliant technologies.
- 7- Chen, Z., Zhu, S.: (2011). The Research of Mobile Application User Experience and Assessment Model. International Conference on Computer Science and Network Technology.
- 8- Griffiths, S. (April 2015). Mobile App UX Principles Improving user experience and optimising conversion. Retrieved from https://www.thinkwithgoogle.com/_qs/documents/2081/Mobile_App_UX_Principles_3.pdf
https://www.thinkwithgoogle.com/_qs/documents/2081/Mobile_App_UX_Principles_3.pdf
- 9- Walaa Helmy & Maha M. A. Lashin (2021). Features of New Design Principles for Mobile Applications UI/UX for Smartphones. Architecture, Arts, Human Sciences Journal, (25)6 491-480, doi: 10.21608/mjaf.2020.25213.1533.
- 10- Hoehle, H., Aljafari, R., and Venkatesh, V. (2016). "Leveraging Microsoft's Mobile Usability Guidelines: Conceptualizing and Developing Scales for Mobile Application Usability,". International Journal of Human-Computer Studies (89:5), 35-53.
- 11- Islam, R., Mazumder, T., Islam, R.: (2010). Mobile application and its global impact,. . International Journal of Engineering & Technology IJET-IJENS Vol: 10 No: 06, p104.
- 12- ISO-9241. (n.d.).

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- 13- Jobe, W. (2013). Native Apps vs. Mobile Web Apps, Stockholm University, Stockholm, Sweden. iJIM – Volume 7, Issue 4, October, 28-29.
- 14- M, Ghiduk A. and Elashiry. (2012). Design of implementation of the user interfaces and the application for mobile devices, international journal of computer app, vol46, pp12-21.
- 15- Nidhi Patel, P. D. (2014). Mobile Application: Usability Evaluation Review. , INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH & TECHNOLOGY (IJERT) NCETECE – 2014 (Volume 2 – Issue 10),, 215-216.
- 16- Nielsen, J. (2010). CHAPTER 1 - What Is Usability? In J. Nielsen, What is usability? In: User Experience Re-Mastered: Your Guide to Getting the Right Design (pp. Pages 3-22). sciencedirect.
- 17- Patel, N. (2014). Mobile Application: Usability Evaluation Review. International Journal of Engineering Research & Technology (IJERT) NCETECE' 14 Conference Proceedings, 215-216.

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