


Chapter 5

Practical Approach for Apps Design in Compliance With Accessibility, Usability, and User Experience

Fernando Almeida

 <https://orcid.org/0000-0002-6758-4843>
Polytechnic Institute of Gaya, Portugal

Nuno Bernardo

Polytechnic Institute of Gaya, Portugal

Rúben Lacerda

Polytechnic Institute of Gaya, Portugal

ABSTRACT

There is a huge proliferation of digital products on the market today for both large enterprises and small businesses. Most of these companies have experienced the development of software products for the mobile market and have been faced with the major challenge of capturing the customer's attention. There is a great focus on making a great first impact and providing the audience with the best possible digital experience. Accordingly, issues related to usability, accessibility, and user experience are extremely relevant. This chapter addresses how these practices can be used in practice by building an app that offers car cleaning services. Several approaches based on building app interfaces that increase user engagement and retention levels are explored and discussed.

DOI: 10.4018/978-1-7998-7848-3.ch005

INTRODUCTION

The technological evolution and the appearance of mobile devices required the development of interfaces to optimize the interaction between man and machine. According to Joo (2017), interaction design has as its focus the user's interaction and, in this sense, explores the factors that affect this interaction, namely the social and cultural context. Whittaker (2013) advocates that knowing how to identify user needs and how to improve user interactions with the system are the key points for interaction design. This view necessarily has practical implications. The designer assumes a key role in the conception of how the user will send, receive, and respond, that is, interact with the information contained in the app.

Several authors suggest some fundamental principles for the development of a project in the interaction design field. Schnall et al. (2016) highlight the importance of user focus. Therefore, to develop an app it is necessary to consider the target audience and how the app can help them. In this context, it is essential to understand the user's interests, the tasks they have to perform, and the goals they have to fulfill within their limits. Camburn et al. (2017) point out that the development of new apps should have innovative ideas and prototypes as a starting point. According to this perspective, design solutions are born by brainstorming ideas that are then tested using prototypes. It should be noted that the prototype does not represent the final state of the solution, but a possible solution with an evolution that encourages the emergence of new solutions that must be tested until the final solution is reached. Finally, Karmokar et al. (2016) point out that design is influenced by several areas such as engineering, psychology, ergonomics, architecture, among others. In this way, the design process of an app should involve multidisciplinary teams. Furthermore, interaction design requires constant user participation, because only then is it possible to obtain an app that meets the user's needs (Lopes et al., 2018).

Interaction design includes simultaneously the concepts of usability and accessibility (Godoi & Valentim, 2019; Langdon et al., 2014; Lazar et al., 2015). However, these terms are often confused, used incorrectly and undifferentiated. In practice, they are distinct concepts with different purposes. According to Shackel (2009), usability seeks to make the access experience clearer and easier for anyone. Therefore, the user should find what he or she is looking for easily, in the shortest time possible, and with satisfaction. While the concept of accessibility seeks to make the app more accessible to people with some kind of special need so that all users can have the same access experience, regardless of their condition (Petrie et al., 2015). We still find apps that despite having accessible information or the features programmed by the developer, do not have easy access. It is then clear the importance of an accessible website, promoting inclusion and expanding the possibilities of access by anyone with a positive navigation experience.

24 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/practical-approach-for-apps-design-in-compliance-with-accessibility-usability-and-user-experience/287256

Related Content

Dynamic, Flow Control-Based Information Management for Web Services

Zahir Tari, Peter Bertokand Dusan Simic (2008). *Web Services Research and Practices* (pp. 260-303).

www.irma-international.org/chapter/dynamic-flow-control-based-information/31216

Web Service Candidate Identification Using the Firefly Algorithm

Negar Abbasi, Ali Moeiniand Taghi Javdani Gandomani (2018). *International Journal of Web Services Research* (pp. 45-60).

www.irma-international.org/article/web-service-candidate-identification-using-the-firefly-algorithm/213913

The Performance of Location Aware Shilling Attacks in Web Service Recommendation

Min Gao, Xiang Li, Wenge Rong, Junhao Wenand Qingyu Xiong (2017). *International Journal of Web Services Research* (pp. 53-66).

www.irma-international.org/article/the-performance-of-location-aware-shilling-attacks-in-web-service-recommendation/182831

Biometric Authentication for the Cloud Computing

Sumit Jaiswal, Santosh Kumar, Subhash Chandra Patel, R. S. Singhand S. K. Singh (2019). *Web Services: Concepts, Methodologies, Tools, and Applications* (pp. 1378-1392).

www.irma-international.org/chapter/biometric-authentication-for-the-cloud-computing/217892

WSDL-Driven SOAP Compression

Christian Werner, Carsten Buschmannand Stefan Fischer (2005). *International Journal of Web Services Research* (pp. 18-35).

www.irma-international.org/article/wsdl-driven-soap-compression/3053