Chatbots vs. Websites: A Comparative Analysis Measuring User Experience and Emotions in Mobile Commerce

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Abstract : During the last decade communication in the Internet transformed from a broadcast to a conversational model by supporting more interactive features, enabling user generated content and introducing social media networks. Another important trend with a significant impact on electronic commerce is a massive usage shift from desktop to mobile devices. However, a presentation of product- or service-related information accumulated on websites, micro pages or portals often remains the pivot and focal point of a customer journey. A more recent change of user behavior –especially in younger user groups and in Asia– is going along with the increasing adoption of messaging applications supporting almost real-time but asynchronous communication on mobile devices. Mobile apps of this type cannot only provide an alternative for traditional one-to-one communication on mobile devices like voice calls or short messaging service. Moreover, they can be used in mobile commerce as a new marketing and sales channel, e.g., for product promotions and direct marketing activities. This requires a new way of customer interaction compared to traditional mobile commerce activities and functionalities provided based on mobile web-sites. One option better aligned to the customer interaction in mes-saging apps are so-called chatbots. Chatbots are conversational programs or dialog systems simulating a text or voice based human interaction. They can be introduced in mobile messaging and social media apps by using rule- or artificial intelligence-based imple-mentations. In this context, a comparative analysis is conducted to examine the impact of using traditional websites or chatbots for promoting a product in an impulse purchase situation. The aim of this study is to measure the impact on the customers' user experi-ence and emotions. The study is based on a random sample of about 60 smartphone users in the group of 20 to 30-year-olds. Participants are randomly assigned into two groups and participate in a traditional website or innovative chatbot based mobile com-merce scenario. The chatbot-based scenario is implemented by using a Wizard-of-Oz experimental approach for reasons of sim-plicity and to allow for more flexibility when simulating simple rule-based and more advanced artificial intelligence-based chatbot setups. A specific set of metrics is defined to measure and com-pare the user experience in both scenarios. It can be assumed, that users get more emotionally involved when interacting with a system simulating human communication behavior instead of browsing a mobile commerce website. For this reason, innovative face-tracking and analysis technology is used to derive feedback on the emotional status of the study participants while interacting with the website or the chatbot. This study is a work in progress. The results will provide first insights on the effects of chatbot usage on user experiences and emotions in mobile commerce environments. Based on the study findings basic requirements for a user-centered design and implementation of chatbot solutions for mobile com-merce can be derived. Moreover, first indications on situations where chatbots might be favorable in comparison to the usage of traditional website based mobile commerce can be identified.

Keywords : chatbots, emotions, mobile commerce, user experience, Wizard-of-Oz prototyping

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