

Design and validation of a questionnaire in Spanish language for software usability evaluation

Article type: Research Article

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Abstract: BACKGROUND: Usability is an essential characteristic of software development, which needs to be evaluated mainly through questionnaires. However, the questionnaires available in Spanish are limited and not available for most software's developers and users. OBJECTIVES: This work aimed to design and validate a new questionnaire to evaluate software usability, considering the characteristics of efficiency, effectiveness, and satisfaction as defined by the International Standards Organization. METHODS: The Software Usability Assessment Questionnaire or SUAQ in Spanish language was designed and validated using Kendall's coefficient, Cronbach's Alpha, Factorial Analysis and Scree test. RESULTS: The questionnaire's validation was carried out by five experts through an evaluation of the clarity, coherence, and relevance of the proposed items. Once the questionnaire was administered to 95 participants, an overall reliability value of Cronbach's alpha of 0.839 was obtained. The factorial analysis is viable since a value of 0.757 was found in the Kaiser-Meyer-Olkin (KMO) test, and a significant value was obtained in Bartlett's sphericity test. CONCLUSIONS: The proposed questionnaire proved to be valid and reliable, and therefore, suitable to evaluate software usability in the Spanish language.

Keywords: Usability, software development and evaluation, Cronbach's alpha, questionnaire

DOI: 10.3233/WOR-193007

Journal: [Work \(https://content.iospress.com:443/journals/work\)](https://content.iospress.com:443/journals/work), vol. 64, no. 3, pp. 453-459, 2019

Received 3 June 2018 | **Accepted** 2 January 2019 | **Published:** 21 November 2019

Price: EUR 27.50

