

Firmitas, Utilitas, Venustas: assessing the validity of the Usability Evaluation Questionnaire

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Abstract

The validity of the Usability Evaluation questionnaire (version 1.1) should be assessed before suggesting the use of this tool to designers. The present study is aimed at assessing the validity of its three scales (Handling, Satisfaction, Attractiveness) using an experimental paradigm. One-hundred and sixty participants were requested to evaluate one instance of eight versions of the same website representing a combination of features (navigation aids, task completion, and appeal) and polarity of the features (presence/absence). Results show sensitivity of the Handling and Attractiveness scales. However, no sensitivity of the Satisfaction scale was found. This might be due to the lack of validity of this scale, or to the type of task that relied on extrinsic instead of intrinsic motivation.

Introduction

The definition of usability provided by the International Organisation for Standardization (ISO 9241) is undoubtedly useful in order to make it clear what usability is in a normative perspective. However, it also lacks of consensus among researchers that can rarely link "efficacy", "effectiveness", and "satisfaction" to measurement procedures and sound theory. On the other hand, the usability construct can be usefully conceptualized as a mental representation that users develop in order to interact with technology. According to this perspective, usability may be described as a multidimensional construct deriving from users evaluation along several dimensions, each one representing calls to schemata users have developed for effectively perform a task using technological artefacts such as websites. The nature of these dimensions is still a matter of debate, but three main dimensions might describe the usability construct. Particularly, the following three (formerly four) usability factors were proposed:

- (Mental) Handling refers to simplicity of use and, in general, to the interaction with the "structural properties" of the technology.
- Satisfaction refers to the perceived users' satisfaction. This factor can also be named "Perceived Utility", since many contributing items describe the achievement of goals using technology.

In D. de Waard, K.A. Brookhuis, and A. Toffetti (Eds.) (2006), *Developments in Human Factors in Transportation, Design, and Evaluation* (pp. 249 - 253). Maastricht, the Netherlands: Shaker Publishing.