A six-step model to transform an ergonomic work analysis into design guidelines for engineering projects - DTU Orbit (16/08/2019)

BACKGROUND: Ergonomic work analysis (EWA) is an ethnographic-like method that can produce very detailed accounts for the real work in work systems. Such knowledge is valuable for designers when they are designing new work systems. However, the rich data from the EWA need to be transformed into more designer-friendly guidelines to have an impact in engineering design projects. OBJECTIVE: We propose a six-step model to transform EWA into ergonomic design guidelines (EDG). This model can be applied by ergonomists and researchers when they are taking part in projects and aim at transferring operational experiences into engineering design. METHODS: Based on experiences with EWA, we set up a model for transforming the outcome of EWA into EDG. We illustrate the model in a case study in the offshore oil industry. RESULTS: The paper describes how to transform the EWA rich data into EDG following the six-step model, including the concepts of characteristic situations and settings of usage. CONCLUSIONS: Based on preliminary testing and validation by designers, EWA can be transformed into useful EDG by following the six steps in the proposed model.

General information
Publication status: Accepted/In press
Organisations: Innovation, Engineering Systems, Department of Technology, Management and Economics, Copenhagen Center for Health Technology, Universidade Federal do Rio de Janeiro
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Publication date: 2019
Peer-reviewed: Yes

Publication information
ISSN (Print): 1051-9815
Ratings:
BFI (2019): BFI-level 1
Web of Science (2019): Indexed yes
Original language: English
Source: PublicationPreSubmission
Source-ID: 167358752
Research output: Contribution to journal › Journal article – Annual report year: 2019 › Research › peer-review