Participatory ergonomics simulation of hospital work systems: The influence of simulation media on simulation outcome

Current application of work system simulation in participatory ergonomics (PE) design includes a variety of different simulation media. However, the actual influence of the media attributes on the simulation outcome has received less attention. This study investigates two simulation media: full-scale mock-ups and table-top models. The aim is to compare, how the media attributes of fidelity and affordance influence the ergonomics identification and evaluation in PE design of hospital work systems. The results illustrate, how the full-scale mock-ups' high fidelity of room layout and affordance of tool operation support ergonomics identification and evaluation related to the work system entities space and technologies & tools. The table-top models' high fidelity of function relations and affordance of a helicopter view support ergonomics identification and evaluation related to the entity organization. Furthermore, the study addresses the form of the identified and evaluated conditions, being either identified challenges or tangible design criteria.

**General information**
State: Published
Organisations: Department of Management Engineering, Production and Service Management, Engineering Systems Group
Contributors: Andersen, S. N., Broberg, O.
Pages: 331-342
Publication date: 2015
Peer-reviewed: Yes

**Publication information**
Journal: Applied Ergonomics
Volume: 51
ISSN (Print): 0003-6870
Ratings:
  - BFI (2018): BFI-level 2
  - Web of Science (2018): Indexed yes
  - BFI (2017): BFI-level 2
  - Scopus rating (2017): CiteScore 2.95 SJR 1.071 SNIP 2.094
  - Web of Science (2017): Impact factor 2.435
  - Web of Science (2017): Indexed yes
  - BFI (2016): BFI-level 2
  - Scopus rating (2016): CiteScore 2.18 SJR 0.944 SNIP 1.775
  - Web of Science (2016): Impact factor 1.866
  - Web of Science (2016): Indexed yes
  - BFI (2015): BFI-level 2
  - Scopus rating (2015): CiteScore 2.4 SJR 1.252 SNIP 1.965
  - Web of Science (2015): Impact factor 1.713
  - Web of Science (2015): Indexed yes
  - BFI (2014): BFI-level 2
  - Scopus rating (2014): CiteScore 2.32 SJR 1.025 SNIP 2.259
  - Web of Science (2014): Impact factor 2.023
  - Web of Science (2014): Indexed yes
  - BFI (2013): BFI-level 2
  - Scopus rating (2013): CiteScore 2.18 SJR 0.95 SNIP 1.936
  - Web of Science (2013): Impact factor 1.332
  - ISI indexed (2013): ISI indexed yes
  - BFI (2012): BFI-level 2
  - Scopus rating (2012): CiteScore 2.22 SJR 1.197 SNIP 2.557
  - Web of Science (2012): Impact factor 1.728
  - ISI indexed (2012): ISI indexed yes
  - Web of Science (2012): Indexed yes
  - BFI (2011): BFI-level 2
  - Scopus rating (2011): CiteScore 1.94 SJR 0.956 SNIP 1.702
  - Web of Science (2011): Impact factor 1.428
  - ISI indexed (2011): ISI indexed yes