Online card sorting: as good as the paper version

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Abstract

Netsorting is a web based cardsorting tool. Our research group used Netsorting in a number of experiments on the cognitive information architecture. In the study we are presenting here we compared Netsorting and traditional card sorting in two different domains: gifts and animals. We measured the performance of the two groups with two indices: the number of correct classification and the correlation among sampled subsets of participants. The performance obtained with the two different methods are equivalent under any aspect.

Keywords: Card Sorting, Information Architecture, Web Based, Usability

Introduction

Card Sorting is a user-centred design method, aimed to improve the findability of a web site. The sorting task requires that the users group a list of labelled cards in coherent sets. After the task participants could be asked to suggest a label for each set they formed. The card sorting is an effective tool to elicit and represent the implicit mental models of the users (Rugg and McGeorge, 1997). This helps the information architecture experts to better organize the information, improving the quality of the site.

A number of computer based and web based card sorting tools are available (for a review see IAWiki: Cardsorting). Nonetheless, we developed our own card sorting tool for research purposes (experimental control, statistical analysis).

The main aim of this study was to assess the validity of Netsorting.

Methods

Design

Two indipendent variables:

- 1) interface: paper card sorting versus Netsorting;
- 2) domain of categorization: a list of animals and a list of gifts.

Participants

60 participants took part to the paper based version of the card sorting. Each participant performed both the sorts (animals and gifts). 363 on line participants completed the card sorting of animals using Netsorting. 736 on line participant completed the card sorting of a list of gifts using Netsorting. We randomly the correlation indexes.

Results



We used an algorithm proposed by Tullis and Wood (2004) to estimate the goodness of the categorization of each group: we randomly divided each experimental group in two subsets of 30 participant. One subset was used as the control subset. The participants of the other subset were randomly sampled to form groups of different sizes (2, 4, 8, 12, 16, 24, 30 participants). Correlation

coefficients were calculated between the similarity matrix of the control subset and the similarity matrices of each sample. We therefore obtained, for the four groups (animals online and offline, gifts online and offline) a correlation index for each sample size (see the first figure).



The correlation indexes of the animals sorting was higher than the ones of the gifts sorting. The indexes were pretty similar for the two interface condition (paper versus Netsorting) in both sortings: there is the no difference among the correlation index of the offline and the online groups.

If all the users of the online

experiments are used, the indexes of the online condition are higher than the ones of the offline condition, in both the sortings.

For what concerns the card sorting of the animals, we also calculated the number of correct classifications made by each participant. The mean correct classification for the online (Netsorting) group was calculated among those participants who classified at least 54 items. The selected participants were 174.

The mean of correct classifications where different for the two groups: online: 54.04, offline: 49.87. The difference reached significance: F (1,232) = 6.114, p = 0.014.

Conclusions

The results of our web based card sorting are as good as those selected 60 participant for each online group for the calculus of obtained with the traditional paper card sorting version. Increasing the number of participants improves the quality of the sorting. Recruiting participants using an online software is by far easier Materials than using the paper card sorting; furthermore, no data entry is needed using a tool like Netsorting. The use of such a tool allows A list of 60 names of animals, belonging to 4 categories: 15 therefore to test a greater number of participants, with lower mammals, 15 reptiles, 15 fish, 15 birds in the sorting of animals. costs; as a result, better classifications can be obtained. A list of 60 possible gifts in the sorting of the gifts.

Procedure

We asked the participants to group the items in different open categories (4 for the animals, 6 for the gifts).

References

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