On a Tip of Your Search: Evaluating Effect of Search Tips for Complex Informational Search Tasks

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ABSTRACT

Search engine is a ubiquitous tool used by millions of people on a daily basis. However, as with every tool, certain skills are required in order to use it efficiently. Unfortunately users have different experience and not everybody is able to find answers to all questions she is interested in [find a paper to cite here]. Helping users to develop their search skills was included as one of the key research directions by [2]. However, the assistance offered by the modern search engines are limited to query suggestion and spelling correction [something else?]. A number of researches are available that study different ways of helping users be more successful with their searches [cite some reviews, or a couple of different papers]. In this work we study the effect of showing users search tips designed to help asking the better queries when solving a difficult informational search task. We show that "the right" tips can improve users' success rate. However generic hints might be misleading and detrimental to user search experience.

Categories and Subject Descriptors

H.3.3 [**Information storage and retrieval**]: Information Search and Retrieval—*query formulation, search process*

General Terms

Measurement, Design, Experimentation, Human Factors

Keywords

User studies, search interface, experimental design, effectiveness measures, query reformulation, expertise, tactics, tips, suggestions, assistance, efficiency.

1. INTRODUCTION

Motivation of search hints as alternative/addition to query suggestion, especially for tasks when search cannot be solved with a single query

Improving user search experience is usually considered as a problem of improving retrieval performance.

Query suggestion is similar to tips, but is not guaranteed to be good, usually rely on more behavior data available for the new query

Query terms selection

Other dialog systems?

Showing predicted retrieval performance

Search snippets

2. RELATED WORK

Based on related work review from Daniel Russel [3].

Summarize works on task level query suggestion Experiment Design State main difference from Dan Russel paper: we focus on informational tasks which are solved with web search and hints are less likely to be 100% helpful

3. TIPS FOR DIFFICULT SEARCH TASKS

3.1 Web Search Game

First part is about the uFindIt game with screenshot To estimate the effect of search tips on user behavior and success we used the uFindIt game, proposed in [1]. The goal of the game is to find the answers to given search tasks using the provided web search interface.

3.2 Search Tasks Description

Describe and give text of search tasks used in the study, mention that they came from agoogleaday

3.3 Experiment design

describe the setup, groups and search tips given

4. RESULTS

Provide raw results of the experiments, e.g. how many participants, how many HITs accepted, rejected, problems. Show examples of search trails for successful and unsuccessful searches.

4.1 Analysis

Give a table and a couple of pictures with main quantitative results

The main findings can be summarized as follows:

- "Correct" search tips allows users to find correct answer more often and do this faster than without search tips

- "General" search hints can have detrimental effect on search success, reducing the success rate and increasing the time spent on task

5. DISCUSSIONS AND FUTURE WORK

Make a conclusion by summarizing the findings one more time

Speculate on the negative effect of general search hints - distracting? hard to follow?, less satisfaction when tips were shown - self satisfaction?.

6. ACKNOWLEDGMENTS

7. REFERENCES

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