Learning Focused Search in an Online Social Network Community

Brittany N. Smith
bnsmith@illinois.edu

Fredrick K. Lugya
flugya@illinois.edu

Craig Evans
csevans2@illinois.edu

University of Illinois at Urbana-Champaign

Abstract

Current search engines satisfactorily return relevant, ranked results to most posed queries. However, when searching on a dense topic for individual or collaborative learning purposes, the highest ranked results retrieved by these engines might not be the best starting point for learners given their current level of competence. We leverage concepts and computational solutions related to peer knowledge and interaction data in order to convert ranked search results in So.cl into sequenced results that allow learners to start with sources that are accessible and understandable before moving to increasingly advanced and complex content.

Keywords: social search, collaborative learning

Introduction

Searching for information on the Internet has become a daily activity for many of us, and over the years, search engine algorithms have greatly improved in their ability to retrieve applicable results to posed queries (Purcell, Brenner, & Rainie, 2012). Many of us do not even look further than the first few returned results to find a link with the information we desire (Jansen & Spink, 2006). However, if submitting search queries for learning purposes and not for the quickest, most succinct result, then current search engines leave some things to be desired. In such instances, the best and most relevant answer may not be desired immediately as the best answer may not be comprehensible to a novice. The preferred ordering of results, however, would first include results that contain the most basic, rudimentary understanding of the topic that match the competence level of the searcher before results that are more technical and complex.

Learning a topic with the help of a search engine may not be ideal for everyone. We do not deny that learning can be more effective and perhaps more enjoyable when working directly with others who can either organize the learning experience, immediately answer questions as they arise, or demonstrate the execution of tasks as in the case with over the shoulder learning, e.g., (Twidale, 2005), or with social search engines like Aardvark (Horowitz & Kamvar, 2010). Yet in the cases when learning in a traditional setting or even a non-traditional setting like a massive open online course or an after-school program is not an option, search engines combined with the social traces created in online social network communities like So.cl can help the learning process. Guided by the notions of Vygotsky (1978) and Lave and Wenger (1991) that social interactions are integral to learning, we introduce a way for the search engine embedded in So.cl to retrieve and present search results in a way that makes it easy for learners to start with sources that are accessible and understandable before moving to increasingly advanced and complex content.

The changes that we propose to the So.cl search engine will utilize data easily provided or calculated within the So.cl community including location, peer interests, and the past search behavior of both ourselves and our peers. These changes can be made using the affordances and information already available in the So.cl community and with minimal changes to the So.cl interface.

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