

PageFetch: A Retrieval Game for Children (and Adults)

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EXTENDED ABSTRACT

Children often struggle with information retrieval tasks as searching for information often requires a developed vocabulary and strong categorisation skills; neither of which are particularly developed in children under the age of 12 [1]. In a study conducted by Druin *et al* [2], it was found that in an experimental setting many children are often uninterested in searching for information online or are only interested in searching for information that is relevant to their personal interests. Consequently, children who were unmotivated were the least successful in completing information retrieval tasks in their study. It was suggested that a more effective means of engaging child participants in search studies must be developed in order to gain further insights into the searching behaviours of children. To this end we have developed a game called *PageFetch* which aims to engage children (aged 8 to 80) in completing search tasks through a fun and interactive search-like interface.

PageFetch is quite similar to other Human Computation Games developed in IR, i.e. PageHunt [3] and Fu-Finder [4], which have been used to improve search engines and study querying behavior, respectively. In these games, players are presented with a web page, and they need to enter in a query that retrieves the page. Players have three minutes to try and find as many of the pages as possible. However, PageFetch is novel, in a number of respects: (1) PageHunt and Fu-Finder used a similar set of pages (a mixture of hard and easy to find pages given Bing's search engine at the time), in PageFetch pages from six different categories were used (cartoons, music, sports, politics, actors and news) to provide a range of genres for children and adults¹. (2) Thus, players are given a choice of category from which pages are presented (rather than random categories/pages). The choice of categories provides more focused game play and lets players pick a genre that is of interest. (3) Unlike PageHunt, PageFetch assigns points according to how high the results page is returned (i.e. the higher the rank the more points), and unlike

¹Pages were selected using trending search terms for under-12s, under-16 and adults from 2011.

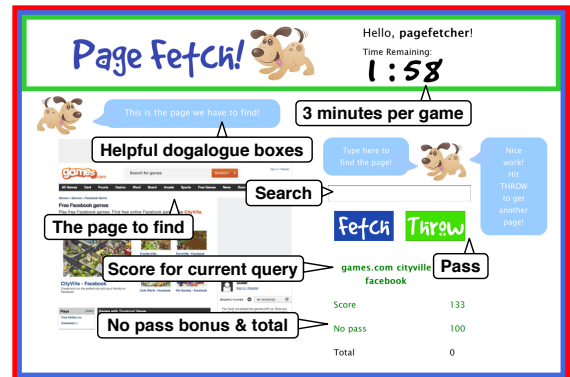


Figure 1: In game PageFetch screenshot.

Fu-Finder, PageFetch uses only one search engine (Bing), as opposed to three. Finally, (4) PageFetch was designed to encourage players to focus on entering successful queries for each page, which is achieved by providing a “no pass” bonus. If a player can find each page presented, regardless of how many query attempts for a particular page, the player receives bonus points (where the more pages they find in a row the higher the bonus). This feature tries to stimulate query re-formulations and was included to see whether we could encourage players to improve their searching abilities i.e. helping them to learn to search better. It is envisaged that through repeated gameplay that children (as well as adults) would be able to improve their performance as they refine their search strategies to retrieve pages. Currently, we are undertaking a number of evaluations with school children and general web gamers/users², where we hope that these studies will establish a better understanding of the search proficiency of younger information seekers.

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²See <http://www.dcs.gla.ac.uk/access/pagefetch/>