# Related Work

The importance of personalized search when using popular search engines can be quantified with the number of studies that have targeted this issue. Authors in [Coll11] and [Jat12] argue for the need to personalize search results. While the former demonstrate, based on the results of an extensive query-log analysis, that readability is valuable signal for relevance of retrieved resources, the latter highlights the need for suitable readability levels on resources retrieved as a result of queries on complex topic formulated by non-experts. Wang et al. [Wasn13] introduce a ranking model adaptation framework that facilitates the retrieval of personalized relevant resources when conducting online searches, whereas Eickhoff and Collins-Thompson [Eic13] discuss the results of examining large-scale query logs to further enhance the personalization task. Similar to our claims, the authors in [Wan13, Eic13] argue for the need to personalize search results to satisfy diverse users’ needs and preferences. However, while the authors in [Wan13, Eic13] focus the personalization strategy on parameters such as authority of web pages or atypical search sessions, respectively, we initially focus on parameters that can aid the learning acquisition process, i.e., readability of retrieved results.

Huumerdeman and Kamps [Huu15] discuss the importance of connecting information literacy and search engines, given that search engines have become indispensable for all types of users, from novice to experts and from children to scholars, to perform information-related tasks [Huu15].

Many search engines[[1]](#footnote-1) have been designed to help children in browsing the internet. However, they either do not offer suggestions or if they do are not necessarily child-friendly or designed to try to narrow down searches to children content. Furthermore, majority of searches are powered by Google (and Google safe search), but ads are seen quite often and results, although filtered for “adult” content are not necessarily targeting children-friendly topics. “Safe search” refers to eliminating from retrieved resources ones considered to be explicit, include profane vocabulary, or are illicit. While useful, it is not enough, since material cannot be comprehended by the respective user is not relevant, even if it doesn’t include explicit or rude vocabulary. To the best of our knowledge, *YUm* is the only environment specifically tailored towards children that targets the issue of reading resource retrieval by considering search intent of the generated queries, provides query suggestions, and filters retrieved resources based on the readability levels of users. We also believe that *YUm* is the first tool specifically designed for educational environments that simultaneously helps both teachers and students dealing with personalized online searches.

@inproceedings{Wang13,

author = {Wang, Hongning and He, Xiaodong and Chang, Ming-Wei and Song, Yang

and White, Ryen W. and Chu, Wei},

title = {Personalized Ranking Model Adaptation for Web Search},

booktitle = {Proceedings of the 36th International ACM SIGIR Conference on

Research and Development in Information Retrieval},

series = {SIGIR &#39;13},

year = {2013},

isbn = {978-1- 4503-2034- 4},

location = {Dublin, Ireland},

pages = {323-- 332},

numpages = {10},

url = {http://doi.acm.org/10.1145/2484028.2484068},

doi = {10.1145/2484028.2484068},

acmid = {2484068},

publisher = {ACM},

address = {New York, NY, USA},

keywords = {learning to rank, model adaptation, personalization},

}

@inproceedings{Eic13,

author = {Eickhoff, Carsten and Collins-Thompson, Kevyn and Bennett, Paul N.

and Dumais, Susan},

title = {Personalizing Atypical Web Search Sessions},

booktitle = {Proceedings of the Sixth ACM International Conference on Web

Search and Data Mining},

series = {WSDM &#39;13},

year = {2013},

isbn = {978-1- 4503-1869- 3},

location = {Rome, Italy},

pages = {285-- 294},

numpages = {10},

url = {http://doi.acm.org/10.1145/2433396.2433434},

doi = {10.1145/2433396.2433434},

acmid = {2433434},

publisher = {ACM},

address = {New York, NY, USA},

keywords = {adaptive interfaces, domain expertise, personalized search, user

modeling},

}

@incollection{Huu15,

title={Supporting the Process: Adapting Search Systems to Search Stages},

author={Huurdeman, Hugo C and Kamps, Jaap},

booktitle={Information Literacy: Moving Toward Sustainability},

pages={394-- 404},

year={2015},

publisher={Springer}

1. SearchyPants.com, Kidrex.org, KidzSearch.com, GoGooligans.com, SafeSearchKids.com, Kidtopia.info, KidsClick.org, Mymunka.com [↑](#footnote-ref-1)