Chapter 2
A Comparative Web Usage Study of Users in Navigational Web Searching

ABSTRACT

This chapter highlighted the differences of users' behaviors between native English-speaking users and Chinese users as the biggest example of non-native English-speaking users. To do as such, the author of this chapter began by discussing the background of earlier web usage studies followed by a literature review on comparative studies that are on the basis of users with different language preferences. Afterwards, since earlier web log analyses are based on web transactions collected from mainly native users, the author of this chapter investigated the feasibility of generalization of former findings for navigational searching to the rest of the users by comparing two web log transactions from two groups of users with different localities in respect to the state-of-the-art in web searching.

INTRODUCTION

Taking into account the earlier discussion, in this chapter we brought a comparative user study to investigate the feasibility of generalizing findings of prior researches on navigational searching to all types of users. As a recall, prior Web usage studies are based on Web logs which are collected from mainly native English speaking users. As such, we are motivated to see if

there could be a possibility of applying prior findings to non-native English speaking users.

Consequently, we conducted a comparative Web usage study based on AOL (American Online[1]) and SogouQ, corresponding search logs of AOL and Sogou[2] search engines. AOL and Sogou are American and Chinese search engines respectively, representing native and non-native English speaking users. Another interesting attribute of these two search engine is the collection time. Both aforementioned search logs are collected by relatively similar time in 2006. Thus, the results of this study can be reliable. Corresponding search logs are discussed in details in section *"Dataset Collection"*.

BACKGROUND

There are prior works which are based on non-native search logs. For instance Spink et al. (2002) conducted a comparative search study between US users and European users. This study revealed that European users perform shorter queries with different topics in mind compared to American users. In addition, some other studies (e.g, Costa, M. and Silva, M., J.2010, Park, S., et al. 2005) are based on logs which the default language of queries are languages other than English.

Aforementioned studies showed significant differences between English native speaking users and other users. Thus, we are motivated to conduct a study which compared two search logs that are collected in similar time spans while the language background of users is different.

To make the outcome of study more useful and reliable, we limited the focus of this study for navigational queries that are issued in English vs. other language (here Chinese).

STUDY DESIGN

To successfully investigate this case, we first needed to make sure that non-native users have a different searching behaviors compared to native ones. Consequently, our Web usage study consisted of two parts; in first part, we prepared an evaluation based on AOL and SogouQ. AOL is a Web service provider based in New York City and Sogou is a Chinese Web search engine based in Beijing. Aforementioned evaluation is discussed in details in section *Evaluation*. Results of this experiment are discussed in *Evaluation Result.*

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