Effects of Web Accessibility on Search Engines and Webometrics Ranking

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ABSTRACT

Previous researches have highlighted the importance of web accessibility of a website. Its importance has made the W3C (World Wide Web Consortium) come up with Web Content Accessibility Guidelines (WCAG) as a guideline for developing an accessible website. Amongst websites available in the web wide world, many of them are fall under the education institution website category. These education institution websites are mostly the first door that people will go to visit to get information about education services and courses provided by the institution. Thus, to be accessible is an essential issue for these websites. Another issue that gets much attention in the current competitive internet world is to be visible by popular search engines and ranked at their top lists. For higher learning institutions there is an online ranking that they like to be in the top list, i.e. Webometrics. This paper attempts to address those two issues of web accessibility and being at the top list. It presents a study that investigates whether web accessibility has a contributing effect to ranking position in Webometrics and popular search engines. The research covers websites from higher learning institutions and education domains. Three popular search engines are used in this research, i.e. Google, Yahoo! and Bing. The study produces interesting results that would be useful as a guide for higher learning institutions that want to improve their online ranking.

Keywords: Search Engines Ranking, Search Engine Optimization (SEO), University Websites, Web Accessibility, Web Content Accessibility Guidelines (WCAG), Webometrics Ranking

1. INTRODUCTION

In its early days, the Internet did not offer much content to users except getting text to be displayed on web clients (Shannon, 2010). The first website ever was published in 1991 by Tim Berners-Lee which is known to be the first HTML document HTML 1.0 (W3C, 2010). Following the advancement of computers and telecommunications, HTML has gone through several phases up to XHTML 1.0 in 2000 and now moving towards HTML 5 which is still being drafted in World Wide Web Consortium (W3C) recommendations as in November 2010. The evolution of web programming
languages enabled developers to use a more complex content compared to the bare text in the Internet old days.

Since the evolution of the Internet, most businesses, organizations, and academic institutions realized the importance of their online existence and started to build their websites to serve different purposes (Okin, 2005). Websites statistics show that there are 240 million registered domain names as in the survey done by Netcraft in May 2010 (Netcraft, 2010). Despite the fact that only 80 million domains were found to be active in the previous survey, web users still have access to a vast amount of information online.

Due to the huge number of websites and the rapid increment in their numbers as we can see in the previous survey, search engines have evolved to make finding information on the Internet an easy job. Archie 1990, World Wide Web Wanderer 1993, ElNet Galaxy 1994, and Google in 1995 were among the first engines to venture into the search services (Branckaute, 2010). Despite the differences in search algorithms, search engines have become the primary source to find information online with Google being number one option (ComScore, 2010).

That competitive situation on the www arena makes website owners have found themselves forced to work harder on getting their websites listed on the most famous search engines. Later on, they have realized that getting listed on search engines is not enough as people tend to visit only the first few web pages the search engines return after a search query (Humleker, 2010). Thus, appearing first on search engines has become the priority of every webmaster. Given this, Search Engine Optimization (SEO) has come into existence.

Since the evolution of the giant search engines such as Google, their search algorithms were safe guarded (Pelikan et al., 2004). Thus, the ranking system they follow is not disclosed to developers or webmasters. SEO experts have tried to study and analyse search engines patterns to identify what actually makes a website ranked ahead of others when searching for the same keywords (Enge 2009; Jerkovic 2009; Grappone and Couzin 2008). Most SEO experts agree that content quality is of great importance in ranking systems. However, there are also many factors that are expected to somehow affect the ranking of a website but their effect has not been studied in depth. One of these is the accessibility of a website as mentioned by Harper and Yesilada (2008). Gary (2007) has mentioned that a highly accessible website would have a greater chance of getting discovered by search engines and might have a better ranking in search results.

Nowadays, many ranking systems rely on search engines such as Google to compute their results beside some other factors. One very important ranking system is the Webometrics Ranking of World’s Universities. This ranking is carried twice a year with more than 20,000 participating institutes worldwide. Webometrics ranks institutes’ websites in different categories such as worldwide, regional, country, and primer league rankings. Webometrics ranking was put forward to encourage competition and enhance academic quality of participating institutes worldwide (Webometrics, 2010). Due to universities’ ranking systems, they have become more concerned with their online performance and how to push their ranking to higher positions in order to achieve better worldwide recognition.

Getting first in search engines ranking has become the priority of webmasters nowadays as we have seen in the previous section. Educational institutes also have their own ranking systems that rely on search engines as well as some other factors to compute the ranking of world universities. Among the most famous ones is Webometrics Ranking of World’s Universities. Webometrics puts a great emphasis on the visibility of websites to compute their ranks as well as results from search engines.

This research study tries to investigate the relation between web accessibility and its relation to SEO and Webometrics’s ranking system. Webometrics has mentioned that their algorithm makes use of results from Google, Yahoo, and Exalead (Webometrics, 2011). These in turn depend on many factors and accessibility might be one of these factors as mentioned earlier. Thus, this research studies
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