

SEO: Improve Website Ranking based on Competitors Analysis

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Abstract - In the technology revolution world, internet became essential tool for every aspect in our daily life. Also, the online presence for companies became a necessary need. So, each company has its own website on the internet. As a result, there is a huge amount of information on the internet. Search engines represent the window to reach the required information from users.

With the rapid increasing of number of website, there is a huge amount of web pages in search engines database, and there is a challenge that website will appear first in SERP (Search engine result page). SEO (search engine optimization) is practices applied on websites to provide them fast reach by SE (search engine).

Websites owner try to improve their websites ranking to increase its visibility in SERP using SEO techniques. Many researcher studied SEO as on-page and off-page factors and considered website technical factors as on-page factors. Therefore, there is no technical SEO guidelines to improve website visibility.

Another challenge found when website owner try to improve his website visibility to appear in first results in SERP. There is a necessary need to build competitive SEO plan to compete others websites.

Website low page rank, traffic, usage and visibility are considered as the main problem for all website owners. This study will provide them with guidelines include best practices based on competitors analysis to improve their site visibility in search engines and get more traffic and visitors to it.

A list of SEO factors which include: technical factors, on-page factors and off-page factors are determined. Then websites under study will be optimized against these factors. After website optimization, it got better result in SERP which increased its performance (impression and clicks) by 3 times higher than pre-optimization measurements. Also, websites visibility increased by 1% as average percent for the used websites.

This study approved that, SEO will be a continuous challenge because of changes in SE technologies and algorithms. The study recommended website owners to make SEO as a continuous process to improve their appearance in SERP.

Key Words: SEO, search engines, on-page, off-page, optimization

1. INTRODUCTION

The Development of Information and Communication Technologies (ICTs) has recently changed every aspect of daily life. The online presence become necessary for all companies, so a huge amount of webpages are established on the internet and there is a challenge how to find the required website in the internet. Search engines were founded to enable users to find relevant information about any topic in the shortest possible time.

Google search engine is the most famous search engine that are used by people around the world, it takes over 77% from more than 6.5 billion search process daily according to [1]. Also, in recent statistics in 2019, according to [2] it take 92% from search engines market share as shown in Figure 1. That means a special efforts are needed to make websites friendly to google and get high ranking in its RP (results page). Google use hundreds of factor in its algorithm and change its algorithm from time to time, which means a continuous efforts should be made to get high ranks in SERP.

SEO (Search Engine Optimization) is a methodology of active practices used to improve website and increase quantity and quality of traffic by making a website visible to search engine through organic search. Getting high ranking in SERP among the huge amount of online pages is difficult process because the SE algorithm is not public and changed from time to time. [3]

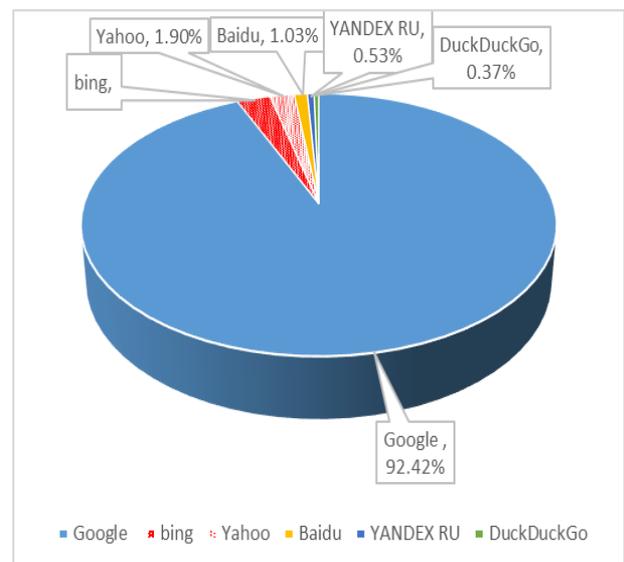


Fig -1: Search engines market share

SEO can be done using white hat or black hat methods. White hat SEO done by using legal practices which accepted by SE to increase website ranking [4]. On the other hand, black hat refers to illegal techniques used to increase website ranking in SERP.

SEO on Google depends on hundreds of factors which are divided into on-page factors and off-page factors. On-page SEO defines as SEO techniques which should be done on website to get high ranking in SERP. This techniques should be done on html code and website content [5]. Off-page SEO is the actions carried out in other websites and affect the website ranking in SERP and it responsible for website popularity and authority.

Since SEO concept appear, many researches have tried to find the most effective factors which affect websites visibility in SERP to get large traffic and achieve company's objectives. In this study, a collection of related work were studied to discover the most SEO effective factors.

A list from the most effective on-page and off-page SEO factors are determined and applied in this research methodology. Research methodology consists of four steps. First step aims to analysis website to discover the required activities for its SEO plan. In addition to determining keywords list and website competitors analysis. Second step is website optimization, the author organized optimization practices to three groups: technical optimization practices, on-page optimization practices and off-page optimization practices. Third step is website post optimization analysis which analysis website after optimization process. The final step is to compare post optimization results with pre optimization result to evaluate the proposed guidelines and decide if more optimization needed to increase website ranking.

This study will provide website owners with guidelines include best practices based on competitor's analysis to improve their site visibility in search engines and get more traffic and visitors to it. To validate the proposed methodology, the provided guidelines applied on three different websites as case studies to increase their visibility in SERP.

2. RELATED WORK

SEO was appear in early 2000s were google publish first guidelines for white hat SEO, but the guidelines was not effective. So, specialists start make efforts on SEO to increase websites visibility and get high ranking in SERP. Specialist efforts should be continuous because Google search algorithm is not public and google change it from time to time. Here some published efforts are studied to analysis ranking factors and get a list with most effective factors to study it in our cases studies.

Most of the previous work used SEO to improve websites visibility to get high ranking in SERP. Google is the most famous search engine, all the previous work deal with it and provided guidelines with the best practices to do to get high rank in it. Webpages rank in google can be improved using on-page SEO as discussed in all previous work except [6] which focus on off-page factors like social media and blogging to increase brand awareness , and off-page SEO are discussed in [7], [8], [9], [3], [5], [10], [11], [12].

Because Google algorithm is not public and change from time to time, there is no standard practices can be found to follow to achieve SEO. Each study from the previous works has its own plan. Google has more than 200 factors which may affect website ranking in SERP and it's hard to study all these factors [13]. So, a list of most common factors which used in the previous work is selected in this study.

On one hand, the most common practice from on-page ranking factors which needed to be followed is keywords and it must be used in: title, Meta tags, headings and domain name if possible. Webpages Meta description is very important factor because it summarize webpage content and display in SERP to give the first impression to researcher about webpage content. Some researcher like [9] recommended practices that must be avoided to use in webpages because it has negative impact on SEO. One of these recommendation is avoid using frames on website.

On the other hand, there is no standard practices to use in off-page SEO. Website owner must take care on backlinks quality which mentioned to his website because it may affect webpages ranking negatively. Blogging is the most mention off-page practice to increase website visibility in SERP because it keep the website updated to attract new visitors and the current visitors come back.

3. METHODOLOGY

All of proposed guidelines are aim to improve website ranking in SERP. Its neglected competitors which have their own SEO plan and compete to reach to first positions on SERP too. So, competitors SEO plans should be discovered and website owners should updated their SEO plan according to their competitors.

In addition to the above observation, the discussed researches in this section provide a guidelines to SEO as on-page and off-page factors. However, there is need to provide a guidelines for technical SEO to get better ranking in Google. In this study, the researcher will introduce guidelines for SEO and will organized it as: technical optimization, on-page optimization and off-page optimization.

Figure 2 illustrates the steps of research methodology, SEO tasks should help the researcher to improve websites under studying rank, traffic and visibility. These goals are very important for all websites owners to enhance their services

and sales capabilities. Research methodology is applied on three different CMS WP websites to measure selected SEO practices impacts.

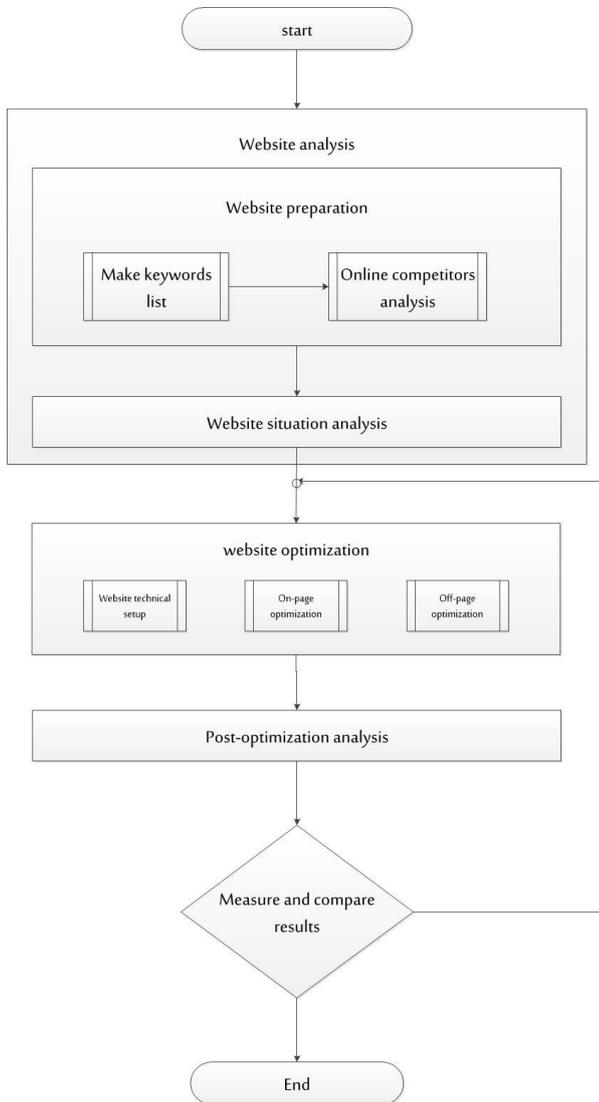


Fig -2: Research methodology

The proposed methodology consists of 4 phases to improve websites visibility and ranking in SERP. The first phase aims to analysis website before optimization process to discover its weaknesses and prepare SEO plan and practices which will be done in the next phase. In addition to that, keywords list will be determined according to website industry, language, region and the used SE. after keywords list determination, website online competitors list will be selected according to keywords list selecting attributes. The selected competitors list will be analyzed to discover its SEO plans and their used keywords to improve website SEO plan.

In the second phase, website will be optimized using SEO practices. In this methodology, research author re-organized SEO practices to technical SEO practices, on-page SEO practices and off-page SEO practices. Website technical

optimization refers to the process of website optimization and preparation for the crawling and indexing by search engine. With technical SEO, website owners can help search engines access, crawl, interpret and index website without any problems. It is called “technical”, because it has nothing to do with the actual content of the website or with website promotion. The main goal of technical SEO is to optimize the infrastructure of a website. Website technical optimization depends on website technical analysis

On-page SEO defines as SEO techniques which should be done on website to get high ranking in SERP. This techniques should be done on html code and website content. [5]. Off-page SEO is the actions carried out in other websites and affect website ranking in SERP and it responsible for website popularity. Off-page SEO also mentioned as backlinks or links. Links are reference to website content in others website, each time website content mentioned in others sites, and website earn new backlink. Links quality and quantity used by google to measure website authority.

In the third step, website will be analyzed after optimization phase to measure the efficiency of the proposed practices against the following SEO indicators:

- a) Impressions: it represents how many times user see website URL in search result. Impressions are recorded whenever a link URL appears on a user’s search results page. Whether or not the link must actually be scrolled into view or otherwise visible depends on the type of search element that contains the link (it can be images carousel in SERP)
- b) Clicks: any click from the search results page that sends a user to a page outside of Google Search is considered a click. If for some reason a user would click a link to an outside page, go back to the search results, then click that same link again, it would still only count as one click. Clicks are assigned to the URL which the searcher ultimately lands on. So if a page in the SERPs redirects to another page when clicked on, the page that the user is redirected to gets credit for the click [14].
- c) Position: The Google Search results page may consist of many search result elements. Search result elements include blue link sections, carousels, featured snippets, Knowledge Graph cards, and many other types of result features. A single search result element can include text, interactive features, and one or more links.
- d) Website audit: Website audit is a score given by SEMrush tool to website indicates percentage of errors and issues which affect website indexing and ranking in SE.
- e) Website ranking: Website rank in Google against the keywords list.
- f) Website visibility: It is an indicator for website progress in Google’s top 100 for selected keywords list.
- g) Domain authority (DA) : a score developed by Moz [1] that check website strength and relevance for a specific

subject area or industry. It depends on the amount and quality of backlinks and the strength and popularity of the domain. It's a logarithmic scale of points, typically ranging from zero to 100, which predicts how well a website will rank on search engine result pages (SERPs). The higher the number of points, the higher is a website's DA.

In the final phase, post analysis measurements will be compared with pre-analysis measurements to check the improvement in the post analysis measurements and decide if any improvements are needed.

4. EXPERIMENT:

Research methodology was evaluated using three websites from different types, the first website "infinite.ps" is digital marketing agency in Gaza offers its services internationally special in Golf Countries. "infinite.ps" services are: digital marketing, graphics design and websites development. Second website "asaseeyat.com" is a website for consulting services in Saudi Arabia offers its services internationally special in Saudi Arabia. "asaseeyat.com" services are: consultation, transformation, development, training, coaching, marketing, and branding and leadership development. Third website "iqlebalsaf7a.com" for podcast which discuss life social topics.

The results indicates that there is improvement in website visibility. Sessions duration was increased especially in website which has exclusive multimedia contents. Website get ranking in top 100 results in Google SERP, one of these website get rank in top 3 results in Google SERP. Most of websites visitors were new visitors in the study interval. Most of the traffic source are from organic research which confirm that, there is improvement in website indexing in Google.

5. CONCLUSION AND FUTURE WORK

Website content is the leader, so website owners must do special efforts to make his website content a valuable and attractive before website optimization process. Each website has its own SEO plan because each website have special technical issues to fix such as website speed average score. Also, each website has its special off-page optimization practices to do based in its competitors analysis. SEO requires continuous efforts to get high rank in SERP, because websites content need to update from time to time and it should be SE friendly. In addition to that, Google algorithm changing periodically. Successful SEO needs an understanding of users search behaviour and understand how they will search in the future. Technology revolution change users search behaviour and it leads to changes in SE algorithms. SEO implantation efforts require special abilities in web design, digital marketing, data analysis and content writing which means it required a team to implement SEO plan. SEO keywords list

should be updated from time to time and must be used in suitable position in websites content to get high rank in SERP.

SEO practices developed continuously and it's difficult to predict SEO in future but there is some SEO practices need to be done on websites to get better ranking in SEO such as:

- Develop automated system for SEO which can use tools APIs and make SEO practices as automated process.
- Voice search optimization: voice search allow searcher to speak to SE to type search query and get search results. Voice search improve user experience and it expected in 2020 to reach half of online searches. So, websites must optimized for voice research to get high rank in SERP.

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