

Search Engine Optimization (SEO): A Study of important key factors in achieving a better Search Engine Result Page (SERP) Position

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Abstract:

Search Engines (SEs) have become the most significant tool for retrieving information from the World Wide Web (WWW) against user-generated queries. Presently, the data available on the Internet is growing exponentially in three different dimensions i.e. size, processing power, & software intelligence. The WWW has evolved from being a collection of static content (web 1.0) to an intelligent web (Web 3.0). To reach a large audience on the internet, it is now essential for every business to have a website. However, to reach more viewers, a website must be visible on top of the Search Engine Result Page (SERP) because SERP top-ranking ultimately gives benefits in terms of more web traffic and helps to generate more revenues. This paper introduces the important concepts of Search Engine Optimization (SEO) and provides numerous guidelines for website developers to enhance the visibility of their websites in the eyes of search engines. We concluded our paper by proposing key factors and introducing a SERP equation to predict business website ranking.

Keywords: *SEO, External Links, SERP, Search Engines.*

1. Introduction

The Internet has provided a wide range of benefits to people in a variety of ways, such as maintaining social connections and supporting community networks that otherwise would not be possible. People are also able to retrieve the required information more than ever before. Moreover, people can also use the internet for education, work, communication, and entertainment purposes. Whereas, World Wide Web (WWW), or simply WEB, is a leading information retrieval service of the giant network i.e. Internet. The Web has

allowed users to access a vast array of documents. The end-users can jump from one document to another document by simply clicking on the URL. Currently, the Web holds the largest repository of documents ever built. In the year 2012, Google revealed that it had indexed more than 30 trillion web pages [1]. Moreover, the same source reported 130 trillion individual web pages indexed by Google in the year 2016. The extensive use of the Web for a variety of applications attracts individuals and companies to be part of this gigantic repository. Whereas, SEs are serving

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billions of people every day to retrieve information from this large repository.

The Web is classified into three generations i.e. Web 1.0, Web 2.0, and Web

3.0; and these version numbers describe the usage of different web technologies and their resultant applications in them [2]. Table 1 illustrates the comparison among different web technologies.

TABLE I. COMPARISON OF WEB GENERATIONS

	WEB 1.0 Read Only		WEB 2.0 Read/Write		WEB 3.0 Semantic	
	Web technology	Web applications	Web technology	Web applications	Web technology	Web applications
Important features	HTML HTTP URI	Static Websites	HTML, AJAX JSCRIPT	Google Gmail, Wikis, MySpace, Facebook, Twitter	ML,XML, RDF, Blockchain	Eurekster, AskWiki, Twine, Virtual Assistant

The Web has made remarkable progress since its advent and its different generations are simply different evolutionary stages of the internet. In Web 1.0, the websites held static contents. The second stage of Web evolution is termed Web 2.0 and deals with the dynamic contents of the website and Web 3.0 focuses on intelligent web services by using semantic markup. The nature of Web 1.0 protocols was stateless i.e. did not capture any meaningful end-user data. Web 1.0 contained read-only content, where a user requests information from web servers, and in return, a static page displays the requested data on a static webpage. The three essential technologies used to display static webpages in Web 1.0 were HTML, HTTP, and URI.

Web 2.0 was established in 2004 and supports decentralization of authority, rich end-user experience, dynamic content, user participation, and control. Web 2.0 brought new technologies such as AJAX and JSCRIPT which supports a bidirectional interactive platform for users. Simply, through Web 2.0, users can develop, share and operate simultaneously on the web which makes the internet more dynamic. Furthermore, the features of web 2.0 open the doors to a new digital world where interactive tools such as Facebook, Twitter, YouTube, LinkedIn, etc. became possible. Web 2.0 has provided an

opportunity for business companies to offer people-centric applications to expand their brands.

Web 3.0 (i.e. Semantic Web) is the next generation of Internet technology and it preceded Web 2.0 technology in 2006. It heavily relies on machine learning (ML) algorithms and promises a more decentralized user online experience. This technology aims to provide capabilities to generate content by machines rather than humans. Web 3.0 progresses exponentially because through this platform, now devices and applications are interconnected with each other without much assistance needed from the user [2].

Today, the majority of business websites wish to improve their SERP ranking which simply means building a company's credibility. There are two choices for companies i.e. organic (natural) & inorganic (paid) to increase the prominence of a link on the Search Engine Result Pages (SERP). An example of SERP is shown in figure 1. Organic page listing on SERP means the website is credible, holds the quality of incoming/outgoing links, and website content is relevant to the user-generated query. Whereas, the inorganic SERP results are those that have been paid by the advertiser to earn

top ranking from SEs [3].

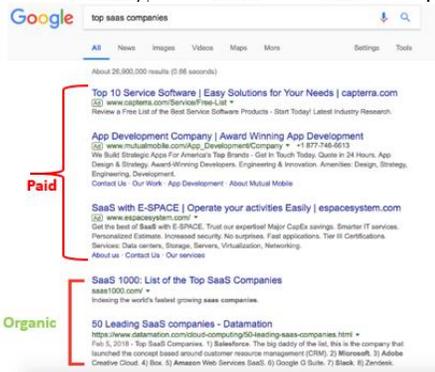


Fig. 1. Search engine results page (SERP)

1.1 This study aimed to address the following research objectives:

- To provide an overview of the Web's evolution.
- Identify and explain the reasons to achieve a higher SERP ranking from Search Engines.
- Identify and explain important design factors to create a business website.
- Identify and explain SEO techniques associated with good website design.
- Propose key factors to incorporate into a business website to earn a better organic SERP score.
- Propose SERP visibility equation to calculate the probability of earning SERP score after placing key factors.

Therefore, the following section provides a review of the literature about search engines and the significance of the top rank position of the website, as well as the important design factors of websites are discussed. Section 3 discusses SEO as well as SEO suggestions/process to improve website ranking. Section 4 presents the use of web links, where we discussed the relationship between internal and external links to gain organic SERP ranking. The key lessons learned and proposed significant factors are presented in section 5, to assist website developers to develop a successful business

website. Section 6 presents the conclusion of this paper.

2 Related Literature

Today, the Web user's first choice to find specific information is a search engine. It can be thought of as answering machines that produce a list of documents against end-users generated queries. This list of documents is also known as the Search Engine Result Page (SERP). Google, Bing, Yahoo! and Baidu are some common examples of widely used SEs. These search engines offer different features and services to users. We cannot use all of them in a parallel fashion, except to choose one [4].

Different studies to summarize the most widely used SEs by looking at their momentous features have been conducted by different researchers [5, 6, and 7]. According to different studies conducted by different research groups and IT companies, Google is a market leader in terms of users' preferences to retrieve information from a search engine.

However, it also highlights that other SEs (such as Yahoo, Bing, and Baidu) still hold a large audience and are in the continued struggle to capture more users.

A detailed market share of different search engines is reported in [8]. Figure 2 reports the global market share of different SEs. It shows that Google, Bing, Baidu, and Yahoo hold a major user base.

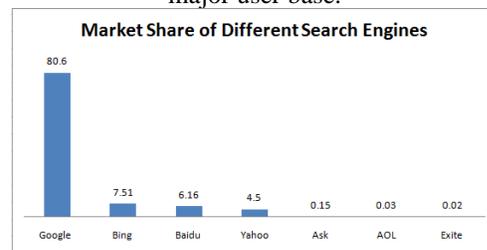


Fig. 2. Global Market Share of SEs

Additionally, it is interesting to note from the graph that the majority of the people in the world use Google for retrieving their desired information; however other SEs still holds a large user base. The study of searches per day

analysis for different search engines was conducted by Internet livestats [9]. In this study, the number of internet users is increasing exponentially and Figure 3's data supports this argument. Simply more than 6 billion searches per day are being performed on different search engines worldwide. Another interesting fact is Mobile device search has surpassed desktop searches.

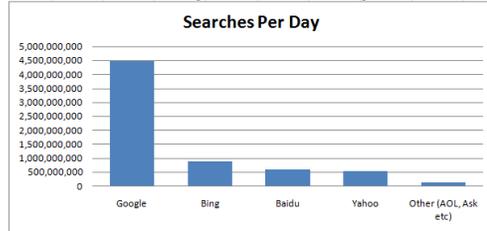


Fig. 3. Searches per Day

2.1 The Motivation for High Ranking

The Search Engine software performs two major jobs i.e. crawling and creating a ranked documents index. When a user inputs a search query to SE, it tries to provide the most relevant results in the shape of SERP. According to one study that was conducted by a famous web-analysis and content marketing company [10], the top listing in SERP is 95% organic search results traffic, compared to only 5% in-organic traffic (See Figure 4). The same study additionally reveals that 1st position in Google's SERP is 33% of the total organic traffic. Organic search is a natural way for getting top ranking from search engines. Keywords optimization, Content optimization, link building, Meta content optimization, Image optimization, URL optimization, etc. are some best practices of organic SEO. The inorganic SEO usually includes paid services such as Pay Per Click (PPC), banner ads, Cost Per Click (CPC), classifieds, etc. Most people believe that the website which receives the first position on SERP is the most useful and relevant website against the given search term. Due to this fact, the majority of website owners are always eager to achieve a 1st-page result for keywords relevant to their website either through Organic or inorganic SEO, but the organic ranking is more trustworthy and long-lasting than inorganic SEO.

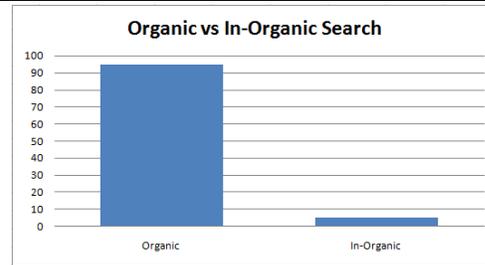


Fig. 4. Organic vs. Inorganic Search

Different studies also reveal that in most cases the SE users only click on the first to three pages (links) of SERP. Alexander's [11] study showed that the websites with the top rank i.e. first position on SERP get 42% of the organic traffic; the second position gets 11% and the third gets 8% only (See Figure 5). This data shows the top three search results combining for almost 61% of the entire SERP listing. This top-three result area is also known as the Golden Triangle because most web users only concentrate their attention on a triangular area covering the first three websites.

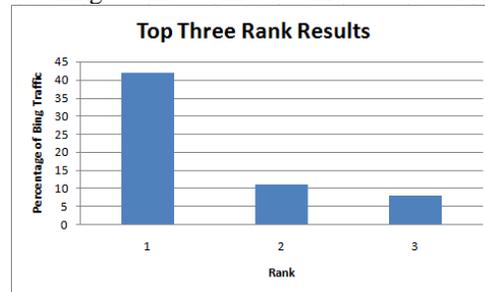


Fig. 5. Organic traffic data

The top SERP rank importance can be summarized as follows:

1. It means that your website contents will appear as a leader on the WEB;
2. Your website becomes a business development front;
3. Increased media attention.

Due to the above-mentioned reasons the website designers and site owners are mostly interested to earn a top position on SERP. Simply, imagine that if the webpage of a business company is on a lower SERP rank

then the probability to generate business becomes less.

2.2 Design Factors of Website to Achieve Better SEO Results

The web is a fact of business life, so all business companies (entrepreneurs, micro, medium, and large) need their presence online to attract potential customers. Besides the use of other marketing tools, the use of the Internet could help prospective customers to find out about your product or services through search engines. Presently, a large number of businesses do not have their website, which could result in losing potential customers [12]. To be part of the largest repository i.e. www, the organization must have its website. Table 2 summarizes the key benefits of the website. At present, unfortunately, the use of websites to promote business is limited to midsize and large organizations. Small business owners;

especially in Pakistan do not have an online presence at all. The majority of small business organizations view their businesses as offline units and pursue traditional approaches to reach new customers. However, we believe that considering the business as an offline entity is a risky tactic to achieve business goals; especially when the majority of people are spending a maximum of their time online.

Different guidelines for SEO optimizations were identified by Niko Solihin [13]. Gokhan and Coskun [14] conducted experimental work to measure the effectiveness of different SEO factors to keep users intact. Eiman [15] and Shazad [16] explain the significance of on-page and off-page optimization to explore a critical role in SERP ranking.

TABLE II. KEY BENEFITS OF WEBSITES FOR IMPROVING BUSINESS

S.No.	Reason	Description
1	Best Employee	Best employee of your company (Never Sleep)
2	Accessible around the clock	Websites are accessible 24x7x365
3	Convenient	A convenient way for buying goods without moving to markets
4	Credibility	Through a website, you can continuously serve consumers online & increase your credibility as a business owner.
5	Sales	To be visible worldwide means you are very likely to gain more customers.
6	Marketing	Online marketing strategies have been proven to be an effective tool for business growth. Promote your website through marketing tools such as Google My Business.

Many studies [17,18 and 20] analyzed the significance of website design factors, concentrating on different aspects such as Link Optimization, Content quality, responsiveness, etc. However, Nour and Fadlalla [21] advise website developers that don't stick with limited design factors for website development. Furthermore, other researchers

also discussed different characteristics that must be part of the business website. Table 3 shows the research summary of different studies, where researchers reported different quality factors for websites.

TABLE III. REVIEW OF THE LITERATURE ON WEBSITE QUALITY FACTORS

S. No	Reference	Factors Considered
1	ChaitanyaVyas [22]	The use of SEO tools to evaluate websites

2	Rakhmawati et al. [23]	SEO, Speed
3	Mavridis et al.[24]	On-Page, Off-Page, Link Authority Features
4	Themistoklis et al, [25]	Domain Authority, Page Authority
5	Iman Rasekh [26]	Link Optimization, Page Speed, Content
6	David Schubert [27]	Responsiveness, Speed, Social Dimensions
7	Yalcin et al. [28]	Design, Content, Navigation, SEO
8	Friedrich et al. [29]	Social Commerce Features
9	Pallant et al. [30]	Organic, Paid, attractiveness
10	T. Ramayahet al.[31]	CEO's IT innovativeness, Security

ChaitanyaVyas [22] discussed the use of SEO tools to evaluate the website performance score. Rakhmawati et al. [23] concluded that to follow SEO legitimate rules and considering speed as a major factor the websites will get positive scores from search engines. Mavridis et al. [24] affirms that the On-Page, Off-Page, and link authority features should always be present on the website to obtain a prominent SERP score. The mistoklis et al, [25] highlighted the importance of domain and page authority. Furthermore, they have discussed the importance of content quality on the website.

Many papers have addressed some common indicators, such as design, content, speed, and Link optimization [26-28]. According to Friedrich et al. [29] the study, social commerce is decisive towards attracting web traffic from new visitors which leads to better SERP ranking. Social commerce features refer to the social sharing features such as Facebook like button, rating, and customer review system like in Alibaba and Amazon's review and rating system, different community forums, etc. Pallant et al. [30] analyzed the use of organic and paid search. In this context, organic search is an extremely important choice for a stable SERP ranking position. Additionally, the same study reveals that audience attention can be grabbed by easy navigation, attractive design, and relevant content. Finally, a new line of research began with the study of T. Ramayahet al. [31], focuses on company CEO IT knowledge. According to the study [31], the company CEO must possess certain traits to be an effective team leader of a successful business. A good CEO must be innovative, a risk-taker, have good knowledge of new IT trends, and be

important to think outside the box because sometimes there are better ways to achieve better business goals.

After reviewing the literature, we conclude that the performance of the website to earn a good SERP ranking is very fragmented and differs according to researchers' web knowledge. However, we believe that to earn maximum benefits from the web, the business website should be equipped with some significant design factors. The most influential factors are listed below:

- Aesthetic appearance: The first impression of a specific website determines the user's willingness to stay or leave the website. The attractiveness of a website can be achieved through visual features, such as proper use of images, icons, color schemes, etc. The use of Scalable Vector Graphics (SVG) can improve the website look. Following are some good reasons why one should use SVG file format:
 - It is resolution independence;
 - Scalable (very small file sizes regardless of how large images may need to be displayed);
 - Support CSS Styling.
- Responsive: Responsive webpage design technology makes a web page look good on all computing devices
- Speed: The webpage load time is also a significant factor and mostly it can contribute to the rise and fall of your conversion rate.
- Site Layout: It is not a good practice to put excessive information on one page, so to attract potential customers, the website design and layout should look inviting by having a detailed layout structure of the site. A better

layout helps the customers to retrieve desired information quickly.

- **Content:** Valuable and fresh content is key to getting a better ranking score from SEs. In short, your content must force website visitors to stay on-site for a long time.

- **Link Building:** The majority of SEs use one-way hyperlinks (also known as “backlinks” or “inbound links”) as a ranking signal because they believe that links from authoritative (good pages) pages vote to your site.

- **Keywords:** Keywords are important for SEs to retrieve information from the web, so adding extremely relevant keywords in website contents can be helpful for website owners to earn a better ranking.

- **Call to action (CTA):** A call to action is a prompt on a website that requests the end-users

to take some specified action. CTA is usually presented as a button that says, “30 free trials’ ‘Sign Up’, ‘Buy Now’ etc.

- **Social Media Links:** Adding Social Networking Sites (SNS) increases the probability to gain more traffic from potential customers and thereby getting improved ranking from SEs.

3 SEO Suggestions & Practices

SEO is an important term for any organization that operates online. SEO can be defined as a technical, analytical, and creative process to improve the visibility of a website on SERP. SEO is classified into Inorganic & organic search. Furthermore, organic search is divided into on-page & off-page, and additionally, these tactics are classified into a White hat, Black hat, and Gray hat (See Figure 6).

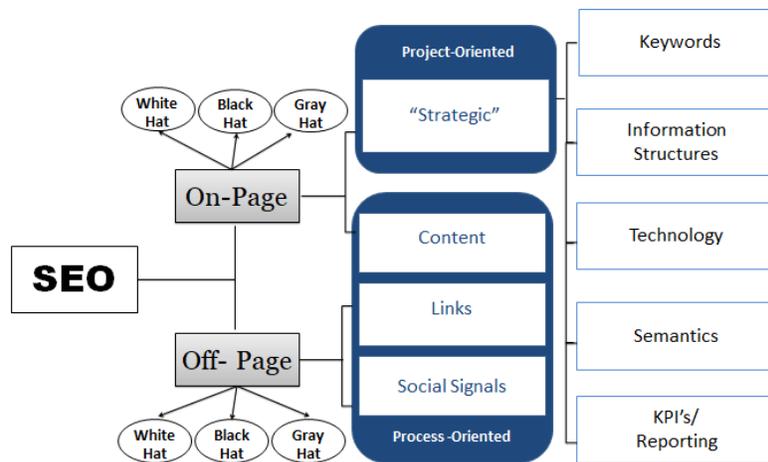


Fig. 6. SEO classification

One of the most important aspects of SEO is making the website easy for both users and search engine robots and crawlers to understand. White Hat, Black Hat, and Gray Hat are SEO practices that are used by website creators to achieve prominent scores from SEs. These techniques aim to earn prominent positioning in SERP and, in return, the website

could see a higher return on investment(ROI). These three methods are discussed below:

3.1 White HAT SEO

White Hat SEO is a positive practice used by the website creator to improve the ranking of their site strictly according to the guidelines of SEs.

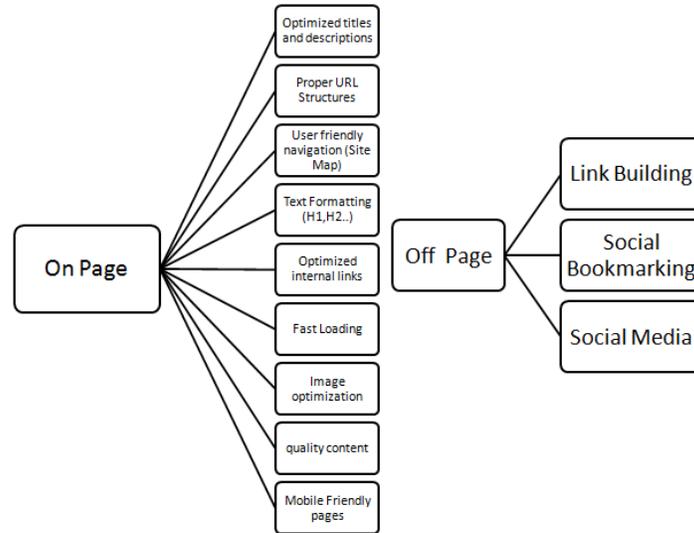


Fig. 7. On-Page & Off-Page factors

White hat is an ethical way to earn SERP ranking; however, it is considerably slower if we compare it with the black hat, but receives a long-lasting ranking position.

Below list is some important components of the white hat:

- Quality content
- Keyword research
- Title & Metadata
- Quality inbound links
- Search Engine optimized coding structure

3.2 Black Hat SEO

Black Hat SEO refers to a negative practice that is employed on the website to increase a site's rank on SERP through unfair means that violate the guidelines, some of these negative practices include:

- Keyword Stuffing
- Content Automation
- Doorway Pages
- Hidden Text or Links
- Link farm

- Cloaking
- Automated queries to Search Engines

Gray Hat is based on middle ground philosophy between the black hat & white hat SEO technique. Some of these methods are:

- Un-naturally high keyword density
- Duplicate content across different websites
- Irrelevant link building

To gain long-lasting benefits from search engines, the website owners must go for white hat SEO practices because it will eliminate the risks that search engine algorithm updates will harm a website's rankings. Additionally, it also ensures that SEO investment will not be wasted.

3.3 Search Engine Optimization (SEO) Process

SEs use bots to crawl web pages and after collecting required information from these visited pages, SEs put them in an index. Next, a specific algorithm of SE analyzes the indexed pages to produce SERP results against user-generated queries.

3.4 On-Page and Off-Page SEO

SEO can be divided into two different strategies i.e. On-Page and Off-Page SEO. Both types are crucial for improving the organic search engine ranking. To understand the difference between these two approaches, we must understand the key ranking signals (On-Page & Off-Page) of SEs.

The scope of On-Page SEO is within a website with different parts that affect search engine ranking, while Off-Page specifically focuses on the authority of your website by receiving links from other sites. The main search ranking contributing factors of on-page & off-page are depicted in Figure 7.

To gain plenty of information about On-page and Off-page SEO different online sources are available such as <https://moz.com/>,

www.seobook.com/, www.seochat.com, and www.searchenginewatch.com.

Presently, business and website owners realize the impact of SEO on SERP ranking but at the same time they become irritated with the process involved in the SEO, however, the real-life lesson is “There is NO Short-Cut to real Success”. So website creators should follow the SEO process steps to get promising results.

3.5 SEO Steps

To run a successful SEO campaign, we have highlighted below six steps and described the practices involved in each of these steps. Figure 8 shows the sequence of steps to run the SEO process.

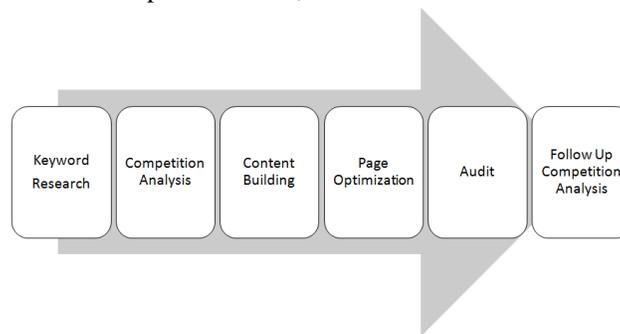


Fig. 8. The Six SEO Steps

Keyword Research: The purpose of Keyword phrase research is to discover the most influential keyword phrases that will bring websites long-term opportunities. The keywords are very important factors in your SEO process because these will be used as ideas and topics that defined your webpage content. To select the most appropriate keywords for our website, different keyword research tools are available which can help us to find the most relevant keywords, such as Google AdWords, HubSpot's Keywords App, SEMrush and keywordtool.io.

Competition Analysis: Once the keyword research job is finished, the next step is to start a competitive analysis of the subject site against its biggest competitors. Once armed with the target keyword phrases, we do a

thorough competitive analysis of the subject site against its 7 – 10 biggest competitors (using both offline and online competitors). We use a series of SEO metrics, including indexed content, Alexa rating, inbound links, domain age, and social media following among others. Through this process, we can gauge the client site's starting position against its competition and identify areas requiring priority in the subsequent work. For example, if we see that relative to the competition, the client's site has 50% less indexed content, then the content building would be a priority in the goal setting that happens in the next phase.

Content Building: The term content is used for different forms of data on the web, such as text, audio, and video. Web-users consume every day these three types of data but only the

quality content will attract visitors. If the content is relevant and useful to its intended users then the probability of staying for a longer period for end-users will be increased. Content writing according to SEO strategy needs certain steps, which include:

- The main keyword phrase appears in the title of your web page or blog post.
- The use of Latent Semantic Indexing (LSI) is also a good idea to write quality content because LSI is an alternative phrase and over-using the main keyword is not encouraged by SEs.
- The main keyword phrase and its various parts should be scattered all over the content of your web page or blog post.
- Use heading tags <h1>, <h2> and <h3> tags to emphasize the importance of content.
- Anchor text is also an important ranking factor so use keywords (including LSI keywords) as anchor text when pointing to other web pages.

Page Optimization: The SEO-optimized website design is the core factor dictating the success of any organization. Mostly, unimpressive and pathetic website performance kills a business. In short, waiting for slow web pages' pushes website visitors to switch to alternatives. To optimize the web pages according to SEO rules, there are two approaches i.e. on- and off-page SEO.

Audit: A website audit is simply an examination of web Page performance to find out the design issues. Auditing the website can be helpful for website developers to point out exact problems which are obstacles to your traffic goals. Different proprietary and open source tools are available for auditing a complete website and can report different parameter information, such as meta descriptions, outward links, response time, anchor text, security, etc. Google Webmaster Tools, GTmetrix, BuiltWith, SEMrush Site Audit, ISS SEO Toolkit, Screaming Frog, etc. are some popular tools to audit websites.

Follow-Up Competition Analysis: In today's competitive market, it is very important to keep your site updated and must attract more users than your competitors. Simply, analyzing your website to know where you stand in a competitive market will help the website creator address specific issues.

4 The Web Graph & External Links

The WWW is an application of graph theory, where the graph is made up of vertices ((Nodes or dots) and Edges (arcs or lines). Mathematically the web can be defined as follows:

$$G=(V,E) \dots\dots(1)$$

Where $V= V(G)$ is a set of vertices

$E=E(G)$ is a set of edges

A simple web with four nodes is shown in Figure 9.

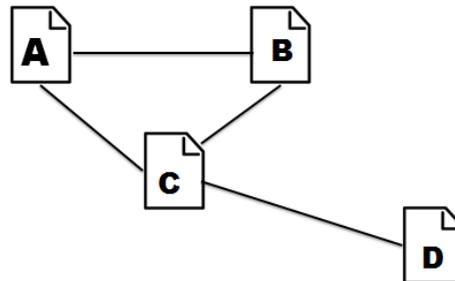


Fig. 9. A Small Web Graph of 4 nodes

Here $V= \{ A,B,C,D\}$

$E= \{(A,C),(A,B),(B,C),(C,D)\}$

Our WEB is full of links (edges) and nodes. Each time when we click a link, simply it means, we are traveling from one webpage to another.

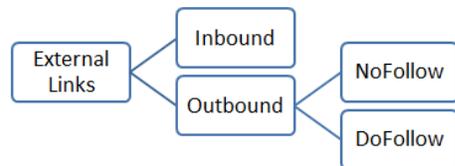


Fig. 10. Classification of external links

An external link is an SEO term, which means that these are links (hyperlinks) that point to any domain other than the domain the link exists on (source). Figure 10 describes the classification of external links. In the SEO industry, an understanding of outbound and inbound links is essential for website developers. The external links can be broken down into two types, as shown in Figure 10.

Inbound links (i.e. backlinks) are links on another domain that is pointing to your website. Backlinks are a very important ranking signal for obtaining a better SERP position because SEs take backlinks as a confidence vote of other websites on your website. A simple example of backlinks is shown in Figure 11.

Outbound links are links on your website that are targeting other websites. These links are equally good in deciding the authority of your site in SEs. Different studies show that pointing to relevant and authoritative websites has a helpful impact on SERP ranking. The webmaster has full control of outbound links.

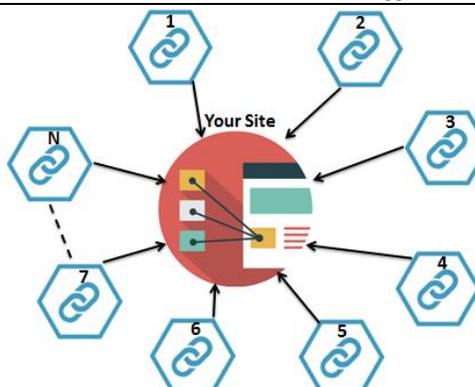


Fig. 11. A Simple example of Backlinks

All major SEs take inbound links as the most influential factor to decide the rank position of a specific webpage. In short, a good number of backlinks will increase the probability of achieving a top-ranking position on SERP. However, low-quality inbound links can damage your site's reputation in SEs. Table 4 presents some key benefits of inbound links.

TABLE IV. SIGNIFICANCE OF INBOUND LINKS FOR WEBSITES

S.No	Reason	Description
1	Rank position	Backlinks from high authority websites will improve your ranking in SERP.
2	Improve Authority	Increase your domain authority and credibility
3	Faster Indexing	Inbound links help search engines to discover your web pages.
4	Increase Visitors	Quality inbound links also bring high traffic volume

There are two kinds of outbound links, i.e. no-follow link and the do-follow link. The do-follow link is the default link and we do not have to add any information to the HTML code. It passes on Google PageRank juice from your webpage to the targeted webpage, while no-follow link is the abnormal link. It does not pass on any Google PageRank juice to the targeted webpage but instead, it blocks off the Google PageRank flow. A no-follow link has a rel="no-follow" tag inside the code. This tag says to the Google spider not to follow the link. To make a concept clear look at Figure 12.

```
a href="http://www.facebook.com/BITS"
rel="nofollow">Join the BITS Community Facebook Page</a>
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Fig. 12. No-follow tag Link example

External links pass "link juice" (ranking power) differently than internal links because the SEs consider them as third-party votes. The usage of internal & external links is provided in Figure 13.

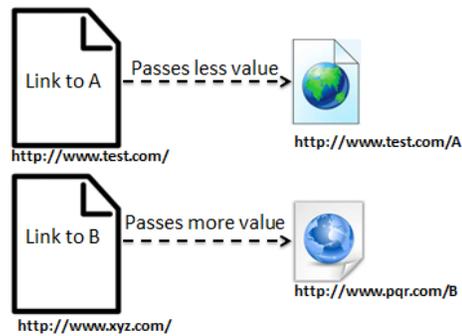


Fig. 13. External vs. Internal Links

Internal links help the SE understand the depth of content within the website. When you put a link to a correlated article within your website, this will help people surf the web for desired information on your site and SEs also take it a better search experience. External Links are hyperlinks that point at (target) any domain other than the domain the link exists on (source). In layman's terms, if another website links to you, this is considered an external link to your site. Similarly, if you link out to another website, this is also considered an external link. External Links point to a domain other than the domain of the link source. Simply, if another website links to your website or if you put hyperlinks in your website that point to another website is known as an external link. Figure 14 is an example of an external link code.

```
<a href="http://www.external-domain.com/">Link Anchor Text</a>
```

Fig. 14. External Link Example

5 A Successful Business Website: Lessons Learned

Nowadays, the vast majority of consumers heavily rely on search engines for taking business purchase decisions. Moreover, the latest technology tools such as websites can help organizations to reach large global audiences. Presently, different open source content management systems are helping small business organizations to create a business website without professional website

designers, but without earning the top SERP position, the companies could not achieve their business goals.

Google is using more than 200 different factors to rank websites, but different research groups reported various important factors to achieve a top position on SERP. For example, [32] discussed six significant factors in their study i.e. number of web pages in a site indexed by SE, Page Rank, number of Inlinks, age of a website, listing in directories, and the number of pages listed in Del.icio.us. SEO rules and their importance is extensively discussed in [33].

However, we report 7 significant factors in our study, which could be kept in mind when developing, and mainlining websites to gain competitive advantages for businesses and to earn a better SERP position:

Design of a website: Before the creation of the website, the website developer should have a proper plan i.e. design goals. Simply, a well-planned website is a key factor in the success of a business organization. A simple, clean, and elegant website is a vital rule for a successful business website.

Performance: Usually at the time of planning the website, the developer tends to rely on a cheap pricing plan, which may be a poor decision for a company website. A website developer needs to focus on the benefits of well-performing web-hosting servers. Website viewers get irritated with too slow or frequently downed websites and they usually think this is the company's fault, so the selection of wrong website hosting companies can be terrible for the company.

Target Market: Listen to the intended audience market and tailor your website contents, which must appeal to the potential customers. Considering customers' requirements is far more important than company or developer thinking.

Responsive: The website should be compatible with mobile devices.

Security: Mostly, website owners put less emphasis on security issues, and doing this they forget the possible cyber threats, which

could harm potential customers. A good number of features must be part of the business website.

Fresh Contents: The contents must be relevant and fresh. It is a good practice to reserve some budget to keep the site up-to-date. Additionally, content should also free from spelling mistakes, free from typos, and grammatical errors.

SEO Usage: Nowadays, SEO is more essential than ever and every webmaster must realize the effects of SEO on business websites. The proper implementation of ON-PAGE & OFF-PAGE can bring a business website to the top listing of SERP.

The most influential factors of the above discussion can be summarized in given below SERP visibility equation:

$$S_v = (O_{op} + F_c) * L_{op} * C_r \text{----- (2)}$$

Where;

S_v = SERP visibility

O_{op} = On-Page optimization

F_c = Fresh Contents

L_{op} = Links Optimization

C_r = Cost of Ranking High,

Where the value of C_r near 0 means extremely difficult and close to 1 means fewer efforts are needed to earn ranking.

The above visibility equation serves as an indicator to website developers that no single factor will make for top ranking in SERP, but multiple important SEO factors are required to achieve desired goals. To clear the concept of the above equation, consider the following example.

Given that the O_{op} got a score of 0.7, F_c received a score of 0.6, L_{op} obtained a score of 0.8 from SE out of 1.0, while assuming the C_r value is 0.5, then the probability of a website earning the top ranking position on SRP is 52%.

6 Conclusion

The purpose of this study is to find out the key factors, which must be addressed when designing a business website. One of the main contributions of our paper has been the survey of significant aspects of quality websites that encourage website administrators to employ in their future website projects. It can be observed from our study that the business website's popularity can be achieved using external links & the use of SEO best practices. To achieve long-lasting results, the website creator must employ white hat SEO methods instead of a black hat because improving the web traffic derived from organic results allows website owners to enjoy top SERP ranking for a longer period. This study concludes that website owners must put maximum emphasis on search engine optimization for a better SERP ranking.

7 References

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