

HOW SEO IMPACTS ON WEBSITES RANK?

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ABSTRACT

The Internet has become a daily part of our lives. Today's most of the businesses are online. Internet businesses and marketing are going to be a future in the upcoming days. Now Search Engine Optimization (SEO) makes a big impact on online companies by affecting their websites. So, being ranked in the Google search result is too important to boost the company's growth. This research paper analyzes what factors impact websites to rank in Google search results. This paper makes us maintain the contents of our website and provides a clear idea of how the contents of the website are ranked in Google search results. For the large growth in internet business, organic traffic with organic search clicks is important. Out of the entire thing, our website's design structure is too much more important than how much user familiar is with our site.

Keywords: Search Engine, SEO, Webpage Rank, Internet Business, Organic Traffics.

Introduction

Nowadays for everything, we search on Google. All the results we get are based on what we search. A tool Search Engine (SE) filters all result and displays some in Google search results. Search engine works on three steps to display search results crawling, indexing and ranking. Without crawling the site is not going to index and without indexing not going to rank anymore. During the indexing of the page search engine is going to check all the things of the page such as title & Meta description, external & internal links, content format, mobile friendly etc.

SEO (Search Engine Optimization) is a process of technique to make a best content format by managing the things (title & Meta description, external & internal links, content format, mobile friendly etc). SEO helps to boost the ranking of the website that ultimately impact on growth in internet business. For any online business (internet marketing) organic traffic is important and is directly connected to the ranking of the Webpage. The more organic traffic you get more your business is boosted. Some small online companies are fully dependent on online traffic. Their main source of income is flexible because of the flexibility in the traffic of their website, so in that cases their website ranking are so important to improve their business. [8] According to the survey and studies the global website conversion rate is 4.31% in 2020 which is higher than the previous year, 2.58% in 2019. The more

pages are ranked the more traffic a website will get. We use the best SEO techniques to achieve a good ranking of the webpage that helps internet businesses to boost its traffic and improve online business.

Search engines use too many algorithms to analyse web pages and make them crawl-able, index-able, and rankable. Once a search engine has indexed a page, it will likely appear among the SERPs. The higher a website ranked in SERPs, the more gets organic traffics. Most users browse the top results so getting at the top of SERPs is most important to success.

Search Engine Optimization(SEO)

Search engine optimization (SEO) is the process of modifying a website to make its content more likely to appear at the top of search engine results. Search engines recommend An SEO strategy that improves the user experience by creating relevant content, and also increases a website's search-engine ranking. It is a strategy used by online marketers to increase the amount of traffic to their websites. Meeting users' needs and delivering valuable information are crucial elements that contribute to enhancing the overall user experience and engagement on websites. Search engines prioritize user satisfaction, meaning a carefully planned SEO strategy not only benefits the website but also enriches the experience for its visitors. It is a powerful tool that provides long-term benefits for businesses and online marketers alike. Its impact can be seen through higher conversion rates, improved brand visibility, and a significant return on investment (ROI). By strategically optimizing their websites, businesses can attract relevant and interested users through organic search, allowing them to effectively reach their target audience. As a result, SEO plays a vital role in boosting sales and fostering sustainable business growth over time.

In the early days of the internet, when search engines were still in their infancy, users faced a significant challenge in locating relevant information amidst the growing chaos of websites. This gave rise to the necessity for websites to find ways to stand out in the rapidly expanding digital landscape. As more and more people turned to search engines like Yahoo, AltaVista, and the emerging giant, Google, the competition for prime positions in search results became intense. Website owners quickly realized the value of appearing on the first page of search results, as users rarely ventured beyond those initial listings. This marked the beginning of what we now know as Search Engine Optimization or SEO. In this nascent stage, SEO primarily revolved around understanding how these early search engines indexed and ranked websites. The goal was to figure out how to structure web content and meta-information in ways that would make websites more appealing to these search algorithms.

SEO Techniques

SEO techniques are a set of strategies and practices employed to optimize a website's visibility and ranking in search engine results. These techniques aim to improve a website's chances of appearing higher in organic search listings, ultimately driving more targeted traffic and potential customers. SEO techniques are,

White Hat

White hat SEO refers to ethical and reputable methods of optimizing websites to make them search engine-friendly, following the guidelines set by Google and other search engines. It involves creating high-quality and relevant content, conducting keyword research, optimizing website design, and building natural and authoritative back links. White hat SEO practitioners prioritize user experience, monitor website performance, and stay updated with the latest SEO trends. By crafting an effective white hat SEO strategy, businesses can strengthen their overall digital marketing efforts and improve their search engine rankings in a sustainable manner.

Black Hat

Black hat SEO involves techniques for manipulating search engine algorithms to artificially inflate rankings on SERPs. These techniques often violate search engine guidelines and are considered unethical by most SEO professionals. While they may yield short-term gains in rankings, black hat tactics carry significant risks, including potential penalties and long-term damage to a website's reputation and visibility. Some common black hat SEO practices include keyword stuffing, hidden text, and links, cloaking (presenting different content to search engines and users), link schemes (buying or exchanging links to manipulate rankings), and creating low-quality, spammy content. Search engines, such as Google, continuously update their algorithms to detect and penalize websites that engage in black hat SEO. Penalties can range from a drop in rankings to being completely removed from search results. Such consequences can have a detrimental impact on a business's online presence and bottom line. The majority of reputable SEO professionals and businesses avoid black hat tactics due to the associated risks and ethical considerations. Instead, they prioritize creating high-quality content, conducting keyword research, optimizing on-page elements, building authoritative back-links, and focusing on user experience to improve search rankings and deliver value to their audience.

Grey Hat

Grey hat SEO incorporates both White Hat and Black Hat techniques that use both ethical and unethical tactics to boost a website's ranking in the SERPs. It's considered riskier than pure white-hat optimization because it relies on practices that search engines frown upon, but less risky than purely black-hat approaches. Grey Hat techniques may provide short-term gains, but they come with significant long-term risks. Websites that resort to such strategies run the danger of facing penalties or being entirely removed from search engine results. For businesses or websites, this outcome can be catastrophic, resulting in a substantial decline in organic traffic and overall online visibility. It's crucial for businesses to prioritize ethical SEO practices to ensure sustained success and avoid potential pitfalls in the future.

According to Google, "The most basic signal that information is relevant is when content contains the same keywords as your search query."

Sites with little or no content, a high number of ads/affiliate links and that redirect users away from the main site tend not to rank well. Your content should be clear, well-organized, and compelling to your readers.

SEO Types

On-page, off-page and technical are the three main types of SEO.

On-page SEO

On-page SEO refers to the tools and techniques you use on your own website's pages in order for search engines' algorithms to rank them higher. [11] On average, organic results in the top five positions on a search page receive 67.60% of all clicks; however, less than half as many people click on results that appear after that fifth spot. So if you want to get traffic, being near the top is crucial. Furthermore, sites that appear among the first results of Google's mobile search have much higher click-through rates. The average CTR for a site in the top spot is 26.9% more than double what it averages for those farther down on the list (12%). When you consider that 92.4% of people who use a mobile phone to search for something nearby visit the business they found, it's easy to see how Google's emphasis on local listings affects your bottom line. On-page optimization is an important factor in generating organic traffic from Google trends we are seeing grow rapidly year after year.

4.1.1 on-page SEO Factor Elements

On-page SEO is made up of many different elements, but some important and highly valuable elements include:

4.1.1.1 E-A-T

E-A-T (Expertise, Authoritativeness, and Trustworthiness) is a significant ranking factor in Google's algorithms. It measures the quality and relevance of a website based on the expertise of its content creators, the authority of the website in its industry, and its overall trustworthiness. Google's Search Quality Guidelines emphasize the importance of E-A-T, and while Page Rank and external links are confirmed elements, other on-page signals are also considered. Improving E-A-T involves creating high-quality content, showcasing credentials, building back-links, establishing trust, and enhancing user experience. Prioritizing E-A-T can lead to better search engine rankings and a more loyal audience.

4.1.1.2 Title Tags & Meta Description

Titles and Meta descriptions are vital for SEO and user engagement. They provide essential information to search engines about the content of a web page and can influence its ranking. A well-crafted Meta description can entice users to click on the page, improving click-through rates and user interaction, factors that Google considers in ranking websites. Additionally, titles and Meta descriptions play a role in shaping how content appears in search results and on social media when shared. Overall, optimizing these elements can lead to higher visibility, better user experiences, and improved search engine rankings.

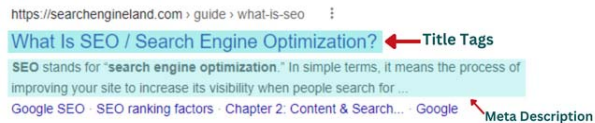


Fig 4.1.1.2: Title tag & Meta description

4.1.1.3 Headers

In the early 2000s, headings (H1, H2, and H3) had a direct impact on page rankings. For several years, adding your keywords to the heading tags was mandatory if you wanted to rank well on search engines. However, that's no longer true, the practice is still popular but isn't necessary for SEO. In August 2021, Google announced that it would begin rewriting the titles of some search results pages. Most often, the title would be taken from the H1 tag on a web page. Despite the change in how headings influence rankings, they remain essential for organizing and structuring content on a webpage. Clear and well-structured headings not only help search engines

understand the hierarchy and context of the content but also improve user experience. Headings have a vital role in enhancing web content accessibility for individuals with disabilities. Screen readers and assistive technologies depend on heading tags to navigate and comprehend the content on a page effectively. By employing well-structured headings, you can significantly improve your website's accessibility, making it more inclusive for all users.

4.1.1.4 URL

Google has confirmed that a website's URL is one of the factors considered when ranking search results. URLs that contain special characters like "&" or "%" may pose challenges for search engines to recognize and index properly. Therefore, it is recommended to use clean and descriptive URLs that accurately represent the content of the page.

Regarding the impact of keywords in URLs on rankings, there has been a shift over time. In 2016, Google's John Mueller confirmed that search engines, including Google, do consider keywords in a URL as a ranking factor. However, in a more recent interview in 2021, Mueller clarified that while keywords in URLs are still a factor, their influence has become relatively lightweight compared to other ranking factors. This suggests that while using relevant keywords in URLs can still be beneficial, it is not as critical as it once was in determining search rankings.

4.1.1.5 Internal Links

Hyperlinks that lead to another part of the same website are called internal links. Internal linking is not only a way to facilitate navigation within your site but also an opportunity for webmasters to enhance the user experience and improve SEO. By strategically using internal links, webmasters can guide visitors to relevant and related content, encouraging them to explore more of the website. This not only increases the time users spend on the site but also reduces the bounce rate, signalling to search engines that the content is engaging and valuable to users. When Google's crawlers encounter internal links, they follow them to discover new pages and content. This helps the search engine understand the structure of the website and the relationships between different pages, which can contribute to better indexation and visibility in search results. Internal links can pass authority and link equity from one page to another. If a page has high-quality back-links from other websites, strategically linking to other pages on your site can distribute some of that authority and improve the ranking potential of those linked pages. This can be especially helpful for newer or less authoritative pages that may struggle to rank on their own.

4.1.1.6 Mobile Responsive

The increasing use of mobile devices for internet browsing has led Google to prioritize mobile-friendly websites in its search rankings. Experts widely acknowledge that websites optimized for mobile screens tend to receive a ranking boost compared to those designed solely for desktops. Google introduced mobile-first indexing in 2020.

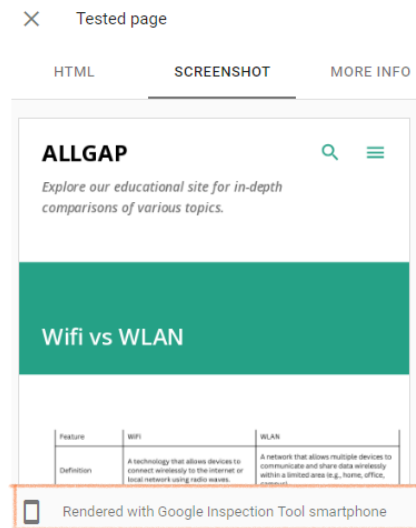


Fig 4.1.1.6: Google mobile-first indexing

With mobile-first indexing, Google's search engine primarily uses the mobile version of a website to crawl, index, and rank pages. This means that the mobile version of your website is now the starting point for Google's indexing process, and it's the version that will be considered for search rankings. For website owners and developers, this change means that having a responsive and mobile-friendly website is crucial for maintaining and improving search engine rankings. If your website lacks a mobile version or has an inferior mobile experience compared to the desktop version, it can negatively impact your search visibility.

4.1.1.7 Site Speed

On July 9, 2018, Google made a significant announcement that it would incorporate page-load speed as a ranking factor for mobile search results. This update, known as the "Speed Update," emphasized the importance of delivering fast and responsive websites to mobile users. With the increasing number of users accessing the internet on their phones, Google recognized the need to prioritize sites that offer a seamless mobile experience. Fast-loading sites would be favoured over

slower ones in mobile search rankings to ensure that users can access the information they need quickly and effortlessly.

This move by Google underscores its commitment to user satisfaction as its primary concern. By factoring in page-load speed, Google aims to provide customers with search results that not only meet their information needs but also deliver a positive user experience. A search engine's ultimate goal is to present relevant and fast results to users, encouraging them to stay on the page longer and find the information they seek efficiently. Website owners and businesses, in response to the Speed Update, have placed greater emphasis on optimizing their mobile sites for speed and performance. They recognize that providing a smooth browsing experience on mobile devices not only aligns with Google's ranking criteria but also enhances user engagement and retention. Fast-loading mobile sites can reduce bounce rates, increase conversions, and improve overall user satisfaction, leading to improved search rankings and online success. As a result, mobile optimization and page-load speed have become essential components of any comprehensive SEO strategy in the era of mobile-first indexing and user-centric search engine algorithms.

There are a lot of on-page SEO ranking factors, but the seven mentioned above are essential to help your website rank.

4.1.1.8 Keyword Research

Keyword research is a foundational process in on-page SEO, aiming to discover the specific words and phrases users use during online searches for information, products, or services. Through keyword research, website owners and SEO professionals gain valuable insights into their target audience's preferences, needs, and language, enabling them to optimize their content accordingly. To perform effective keyword research, various tools like Google's Keyword Planner, SEMrush, Ahrefs, and Moz Keyword Explorer are available, providing data on search volume, keyword difficulty, and related keywords.

For example, if you run a website selling handmade jewellery, keyword research may reveal that "handmade silver necklace" is a high-traffic keyword with relatively low competition. Armed with this information, you can create targeted content centered on this keyword, optimizing product pages, blog posts, and category pages to better align with users' search intent. Analyzing keyword metrics allows website owners to prioritize keywords with high search volume and reasonable competition, striking a balance between attracting substantial traffic and avoiding fierce competition. Moreover, focusing on long-tail keywords, longer and more specific phrases like "handmade silver necklace with blue gemstone pendant,"

allows for better targeting of niche audiences and capturing users with higher purchase intent.

Since SEO is an ever-evolving discipline influenced by changing search trends and user behaviour, regular updates to the keyword strategy are crucial. New keywords may emerge while others may lose relevance. Monitoring keyword performance and staying informed about industry trends ensures that website content remains relevant and aligns with users' active search queries. This ongoing optimization effort helps maintain and improve the website's SEO performance, leading to higher rankings in search engine results and increases organic traffic from the target audience.

Off-page SEO

Off-page SEO is what you do to improve your search rankings without adding new content or metadata. Increased off-page SEO efforts can improve a website's overall appearance to search engines. The most accurate way to describe the importance of off-page SEO is that it provides forward momentum for a site by helping it rank higher in search results. It is all of the things that help people find your content outside of your website. Creating and maintaining a network of quality links can improve your website's visibility in search engine rankings, leading to more traffic, leads, and sales. So, it was tempting to attribute search rankings directly to traffic. The significance of off-page SEO lies in the forward momentum it provides to a website's online presence. By building a strong and reputable online presence through off-page tactics, such as link building, social media engagement, and online partnerships, a website can gain more visibility and attract a broader audience. This, in turn, leads to increased traffic, more leads, and potential sales opportunities. Building and sustaining a network of high-quality and relevant backlinks from authoritative websites sends a strong signal to search engines, indicating that the website is valuable and reliable. As a result, search engines are inclined to elevate the website's ranking in search results, facilitating easier discovery and access to the content for potential customers.

Technical SEO

Technical SEO is the process of making small but crucial changes to your website in order to make search engines more likely to find and list it among their results. It is essential because it's one of the best ways to make sure that search engines can easily understand and parse your website's code. If this happens, it increases your chances of ranking in results pages or even becoming an Instant Answer!

The main objective of technical SEO is to enhance the website's code and structure, making it more compatible with search engines. This involves various tasks, such as optimizing Meta tags, title tags, and header tags, while also refining

URL structures, XML sitemaps, and robots.txt files. Moreover, technical SEO emphasizes improving website loading speed, ensuring mobile responsiveness, and rectifying issues like broken links and duplicate content. By addressing these technical aspects, websites can become more search engine-friendly, leading to better rankings and improved user experience. When search engines can effectively comprehend a website's code and content, it increases the likelihood of higher rankings in search results. This is because search engines prioritize delivering the most relevant and user-friendly content to their users and technical SEO plays a vital role in facilitating this process. Websites that prioritize technical SEO are more likely to be featured on the first page of search results and experience a boost in organic traffic. Search engines recognize and reward these efforts to provide a seamless user experience, which ultimately benefits the website's visibility and online success. Technical SEO plays a vital role in attaining featured snippets, prominently displaying a website's content at the top of search results.

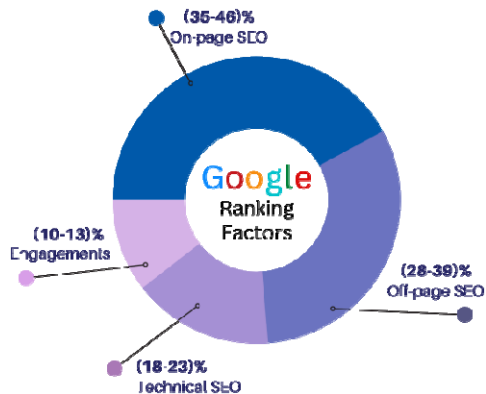


Fig 4.3: Google ranking factors

Google Algorithm's

Google's search algorithms are complex sets of rules designed to sift through its vast database and deliver relevant results for user queries. These algorithms consider multiple ranking factors, along with Google's proprietary PageRank™, to determine the relevance and authority of webpage's, ultimately influencing their positions on search engine result pages (SERPs). PageRank™, Google's secret recipe, analyzes the quantity and quality of links pointing to a webpage, a key metric in evaluating its importance and credibility. Over the years, Google has continuously refined and updated its algorithms to enhance the search experience, making thousands of changes since its inception in 1998. These updates aim to improve the accuracy,

fairness, and usefulness of search results, ensuring that users find the most relevant and valuable information for their queries.

Table 5.1
Google Algorithm's Updates

Algorithms	Updates
Florida	The Google Florida update, which took place on November 16th, 2003, implemented certain filter mechanisms for several keywords. These changes resulted in a massive change in the ranking positions of websites and were perceived as such immediately by SEOs.
Big Daddy	The Big Daddy Update was seen as a significant infrastructure upgrade, but it had little effect on search results. The update began in 2005 but wasn't completed until March 2006. On that date, all old data centers were turned off and replaced with new ones.
Jagger	In 2005, Google released a series of algorithm updates they called the Jagger Update. This update was intended to target unnatural link-building, duplicate content, etc.
Caffeine	In 2009, Google announced an update to its search algorithm called Caffeine that would become one of the most significant changes in the company's history.
Panda	In February 2011, Google launched Panda as part of its ongoing effort to eliminate black-hat SEO and web spam.
Freshness	Google announced its "Freshness Update" on November 3, 2011. The freshness update made search results more precise and responsive to user intent by increasing the importance of recent content relative to older content.
Page Layout	On January 19, 2012, Google introduced a first-page layout algorithm update that penalizes sites with too many ads at the top of their pages.
Penguin	In 2012, Google updated its Penguin algorithm to target link spam and other manipulative link-building practices.
Payday	The Google Payday Loans update was released in 2013 and targeted spammy queries and spammy sites.
Pigeon	In 2014, The Google Pigeon Update radically changed the way local businesses ranked in organic search. Google users were certainly a beneficiary of these changes in that their search experience for local businesses became more relevant.
Mobilegeddon	In April 2015, Google's mobile-friendly update revolutionized the way search results were displayed and emphasized content suited for small screens.
Quality Updates	Google's first quality update was launched in May 2015 to demote low-quality content. It terrified many webmasters and digital marketers, causing them to wonder whether the update would penalize them.
RankBrain	In 2015, Google launched a tool called RankBrain that helps improve search results by better understanding the likely intent of user queries.

Analysis on Ranked Websites SEO Scores

I have conducted an extensive analysis of top-ranking websites across various keywords, including the examination of the top 20 ranked websites for each keyword. Subsequently, I assessed their SEO performance by utilizing Google's Lighthouse SEO tool to calculate their SEO scores for both the websites and their individual pages. This comprehensive data collection, spanning over 100 different keywords, has provided valuable insights into the SEO scores and behaviours of the ranked web pages, facilitating a clearer understanding of their performance. All the keywords used are random keeping in mind that a general user searches in Google in their daily life for different kind of purpose. That why the ranked sites for different keywords are different that makes easy to understand the value of the top results SEO score and their performance.

The Study shows that the top 20 ranked search results for different keywords have an average SEO of around 85%, with their respective websites having an average SEO of around 90% in Google. From the research, I saw that top-ranked results are almost old websites and have higher matching keywords than the below-ranked ones. There is the question of, why the old websites have more priority? It is because they have long-term user experience and great output for users that are to be recorded in the Google database. It is clearly seen in figure (a) that the ranked page's SEO is high. I also found that having a good SEO score on a particular post page was not too helpful in getting the highest rank in search results, as your website's overall SEO is the big factor.

It's important to remember that having a high SEO score for your website doesn't necessarily guarantee a top position in search engine results, especially in the case of Google. Google considers numerous factors before indexing web results. To truly appreciate the benefits of SEO, you need to grasp its underlying advantages, which may not be immediately apparent. On the other hand, Bing search engine places a strong emphasis on fresh content and relevant keywords. Therefore, it's crucial to comprehend the significance of SEO and how it can contribute to attracting substantial traffic from search results. Effective SEO goes beyond just achieving a high score; it involves creating a user-friendly, informative, and trustworthy website that search engines, like Google and Bing, are more likely to favour and present to users searching for relevant information.

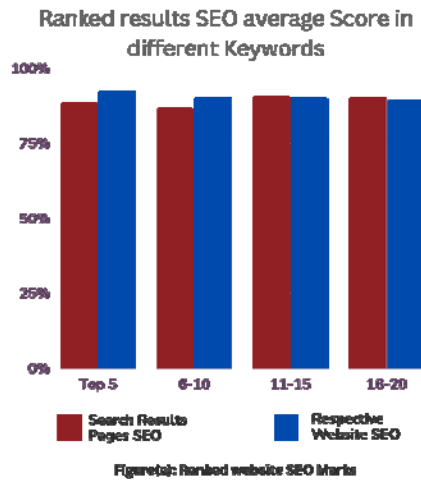


Table 6.1
Ranked websites average SEO score

Search Results	Ranked post average SEO score	Ranked post respective website average SEO score
Top 5	88.75%	92.7%
6-10	86.9%	90.7%
11-15	90.95%	90.5%
16-20	90.5%	89.7%

Here you can see data that shows how high SEO scores are for ranked search results. You may wonder why the top 5 results aren't as optimized as the ones below and some important factors include keyword matching, website age, performance, user experience history (e.g. whether they came from a link to your site), etc. So, in short; a good SEO strategy will help your website achieve better results (better traffic and greater business success).

Conclusions

SEO has been developed for decades, and studies have shown that internal and external website optimization is key to high search engine rankings. Search engine optimization is based on three main approaches: white hat, black hat, and gray. The best way to increase the likelihood that a web page will rank high in search results is by optimizing it with the white-hat method. We examine how on-page SEO, off-web pages, and back links affect Google's constantly changing algorithms. This work summarizes existing findings on SEO and offers suggestions for future research.

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