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The Application of Ethical Standards to Digital Marketing:
The Search Engine Optimization Case

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ABSTRACT

Because of the Internet's recent explosive growth, search engines now have the difficult task of selecting through billions of pages and displaying just the most relevant pages for the supplied search query. Google has established itself as an important conduit between individuals and the information they seek on the internet. As a result, any SEO expert should be studying the tactics that bring traffic to their website. So, the main goal of this study is to determine the effectiveness of ethical SEO practices in reaching top-ranking spots in SERPs. To do so, it employs a case study approach where the quantitative and qualitative data are collected from companies engaging in strictly white-hat SEO, to analyse their impacts and consequences. The results of this paper show that exponential traffic growth can be achieved by consistently applying and upgrading both on-page and off-page SEO, which results in steady and sustainable growth.

KEYWORDS: Digital marketing; SEO; Ethical SEO; Online visibility

SUMÁRIO

Devido ao recente crescimento explosivo da Internet, os motores de busca têm agora a difícil tarefa de selecionar através de milhares de milhões de páginas e exibir apenas as páginas mais relevantes para a consulta de pesquisa fornecida. O Google estabeleceu-se como um canal importante entre os indivíduos e a informação que procuram na Internet. Como resultado, qualquer perito em SEO deve estudar as táticas que trazem tráfego para o seu website. Assim, o principal objetivo deste estudo é determinar a eficácia das práticas éticas de SEO em alcançar lugares de topo nos SERPs. Para tal, utiliza uma abordagem de estudo de caso em que os dados quantitativos e qualitativos são recolhidos de empresas envolvidas em SEO estritamente de "white-hat", para analisar os seus impactos e consequências. Os resultados deste estudo mostram que o crescimento exponencial do tráfego pode ser alcançado através da aplicação e atualização consistente de SEO tanto "on-page" como "off-page", o que resulta num crescimento estável e sustentável.

PALAVRAS-CHAVE: Marketing digital; SEO; SEO ético; Visibilidade online

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INTRODUCTION

The aim of this paper is to discuss the benefits and consequences that arise from using SEO practices and establish the best route for marketers who seek to reach top positions in SERPs. In the first section, we can find a detailed explanation of the most important concepts regarding this theme, starting from the widespread use of the Internet, its evolution toward a marketing platform and the birth of digital marketing, and finally, the branches of SEM, including SEO and its many strategies.

After researching the most prominent and relevant literature in the digital marketing field, a case study methodology was established to design the research framework in section two. This consisted of analysing 2 case studies from other authors who experimented with white-hat practices and another case study made from data collection and observation during my internship. The goal was to determine if the use of strictly ethical means was enough to see significant results in the metrics chosen, so a study hypothesis was created and verified through the analysis of the data collected, which can be found in the third and final section.

LITERATURE REVIEW

1.1. The Internet and Marketing

The Internet can be understood as a global network that provides information and communication methods, consisting of interconnected networks using standardized communication protocols (*Internet*, n.d.). As it developed from static to dynamic and interactive web pages, known as Web 2.0, it brought significant changes to business practices, namely in marketing.

Having started in the 90s and continuously revolutionized the marketing industry, the Internet now is not just about selling products, but it also provides product information and comparisons, trading, auctions, software, etc. It provides marketers with a "medium through which commerce can be transacted and specific marketing tactics can be employed" (Olson et al., 2021).

Over the last decades, this phenomenon can be observed where the Internet's growth has created the space for new marketing techniques to be developed, known as digital marketing. These digital tools also affect the way marketers communicate with their target audiences since, as of 2020, 59.9% of the world's population actively engages in the digital space (World Bank, 2020).

Web 2.0 made interactions between customers and suppliers easier, highlighting the importance of two-way marketing strategies, which increase customer loyalty and improve business performance (Bacile et al., 2014). The Internet and the use of ICTs have completely transformed the customer-supplier relationship and the subsequent marketing strategies for businesses. So much so, that Internet advertising spending amounted to 144.8 billion US dollars worldwide and is projected to continue to grow in 2022 (Statista, 2022).

This has put pressure on today's marketing executives to become more aware of their market, where accurate and timely information about all elements of their strategic decisions is essential (Bala & Verma, 2018).

1.2. Digital Marketing

Digital marketing is defined by several authors as using technology to achieve marketing objectives (Chaffey, 2017; Bala & Verma, 2018). This implies the creation of a company website along with continuous online promotional activities, to build a stronger brand image and increase traffic. These benefits are measured by ROI in terms of money spent on digital marketing and the success of said marketing efforts is dependent on key characteristics such as accessibility, navigation, and speed (Koiso-Kanttila, 2004).

As technology develops and marketing becomes increasingly digital, marketers are presented with new channel opportunities such as mobile marketing, Big Data, cloud computing, and Artificial Intelligence… As much as exploring these can bring business growth, it also poses new challenges for marketers lacking technical skills and expertise. This is especially true when it comes to small businesses, which research shows are less likely to participate in digital marketing (Ritz et al., 2019). This gap in digital marketing adoption can be traced back to the skills needed to implement a campaign. These are categorized by Smith (2012) as external (technology) or internal (objectives and campaign outcomes).

This hurdle in terms of digital skills can be quickly surpassed when considering the benefits that digital marketing brings for both companies and customers. As mentioned previously, companies experience financial gains and facilitated interactions with target audiences, among others. But the benefits extend to their consumers as well, who have access to clear information about products, can compare and share content more easily, can purchase an item instantly and at any time, and have access to transparent data regarding the product's entire lifecycle.

Overall, adopting digital strategies in marketing campaigns is shown to improve the customer's purchase experience, which is aligned with the strategic priorities identified by Ascend2 (*2019 Digital Marketing Strategies*, 2018). They consist of increasing sales prospects, increasing customer acquisition, increasing customer engagement, improving brand awareness, improving result measurability, increasing web traffic, and improving web user experience.

To achieve the listed priorities, digital marketers may choose to implement several tactics, that can fall under the following categories:
1. Content marketing: a methodology centred on producing and disseminating valuable, relevant, and consistent content to attract and retain a well-defined audience and, eventually, stimulate profitable customer action
2. Email marketing: directly contacting customers by sending emails to promote relevant products or services
3. Search and social ads: placing ads on social media and search platforms, often linked to certain keywords that consumers search online
4. Data-driven personalization: the process of gathering data about individuals to influence marketing decisions and audience segmentation
5. Marketing technology usage: using software and tools to automate marketing processes and reach target audiences
6. Social media advertising: paying social media companies to display content (e.g., Facebook, Instagram, Twitter, Pinterest, LinkedIn, Snapchat)
7. Search Engine Marketing: using search engines to increase the visibility of a website

1.3. Search Engine Marketing and Search Engines

To understand the need for Search Engine Marketing (SEM), we first need to understand how search engines work. They are tools that answer search queries by retrieving relevant web pages from their respective database, created by crawling, and indexing available websites on the Web (AbuKausar et al., 2013).

The keyword here is relevance, which is calculated by algorithms based on the context and intent of search queries, which include many factors that are mostly unknown to the public. The website's relevance is determined by analysing the content of websites, their authority and link building patterns (Zhu et al., 2016).

Since around 93% of all web traffic is via a search engine (*Search Engine Statistics 2022*, 2022), companies need to produce content that secures them a high-ranking spot for a certain keyword. To analyse how companies can achieve this, marketers must study the known factors that affect rankings. As of April 2022, the search engine market share worldwide is concentrated mainly in Google (92.07%); Bing (3.04%) and Yahoo! (1.39%) (*Search Engine Market Share Worldwide*, n.d.). So, it makes sense that most literature focuses on Google's algorithm and ranking system.
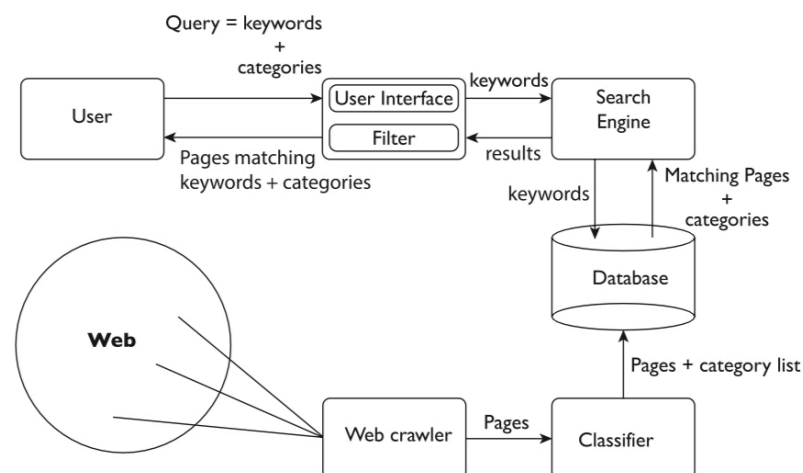

Figure 1 Search Engine Design

Source: Chekuri et al. (1997).

Based on the flowchart in Figure 1 we can see how Google processes a search query made by a user, starting with the identification of pages with content relevant to the keywords specified and the search intent. Then, it uses that information to evaluate and score the pages to rank them on the SERPs.

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Search results are selected by search engines through four steps: crawling, indexing, searching, and ranking (Bai, 2013). Crawling is the process of extracting information from web pages by search engine programs called web spiders. Indexing is the process of extracting important keywords from different parts of the crawled web pages. These keywords are usually stored in a database for later use. Searching is the process of matching keywords from web pages saved in the database with keywords entered by searchers. By doing so, the search engine can return a list of best-matching web pages based on keywords. Lastly, ranking is the process of putting the matching list of results in rank order based on each search engine's unique ranking algorithm.

Search engines have become an integral part of consumers' lives, assisting them in information retrieval and influencing their shopping cycle. Consumers use search engines to learn about brand and product information, dig out professional and consumer reviews, discover deals and coupons, compare prices, link to brand or retailing websites, find store locations and do just about everything that needs to be done to complete a purchase. Above all, this is the fact that search engines have become a keyway to acquiring information.

Google, in specific, has turned the search engine into the essential device used to find data and fuelled the growing thirst for information. Technology has made the modern consumer more empowered, more critical, smart, well-informed, and proactive than ever before (Bala & Verma, 2018). This has placed added pressure on organizations to become multidisciplinary with their marketing approach so they can stay competitive and cut through the variety of information on the web.

This is where SEM comes into place, taking advantage of the wide usage of search engines and consumers' dependency on these tools. It's the quickest developing promoting medium on the planet (Bhandari & Bansal, 2018). The appeal of this technique comes from the fact that all the leading search engines are constructed based on a logical model that makes it conceivable for the marketers to compare search engine marketing strategies in terms of their impact on the profitability of online marketers (Taylor, 2013).

1.4. Types of SEM

SEM is a broad area of digital marketing which is divided into two types, PPC (Pay Per Click) and SEO (Search Engine Optimization). Both methods try to gain visibility in SERPs, the difference between them lies in the former being paid and the latter free (Sagot et al., 2017).
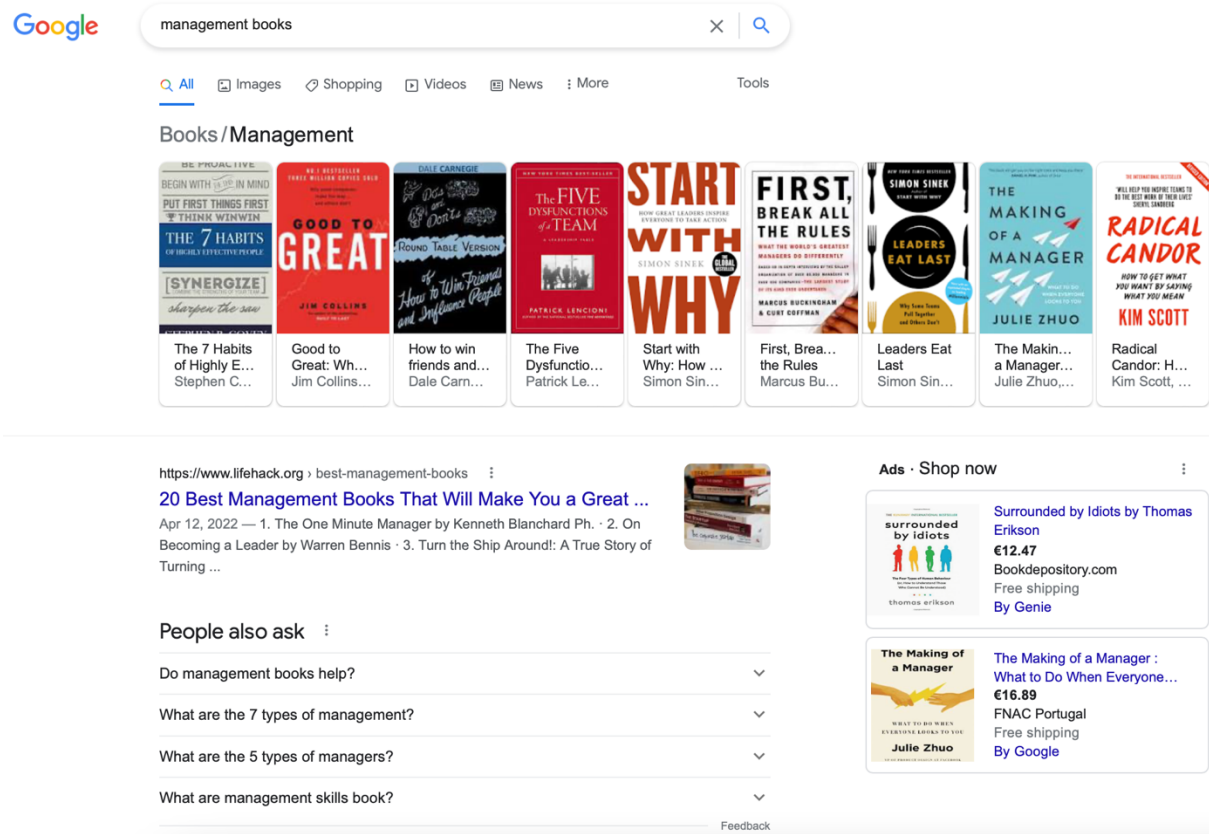
Figure 2 Google search for "management books"

Source: https://bit.ly/38PYfmz

PPC, also known as Search Engine Advertising (SEA), consists of an internet advertising model used to drive traffic to websites, in which an advertiser pays a publisher, in this case, a search engine, when the ad is clicked. It's considered a non-natural website ranking method and should only be used to increase the visibility of high-quality content.

In this example of a SERP for "management books", we can see the distinction between the organic results and the paid ads. By simply typing the keywords "management books" consumers get directed to paid ads by bookstores where they can complete their purchases.

The most important overarching explanatory models that explain user behaviour on the results pages are the principle of least effort (Zipf, 2016) and satisficing (Simon, 2003). As search engines present results in the form of ranked lists, the position effect plays a huge role in what users look at and which results in they select. They predominantly select the results listed first. However, not only the ranking of the results is important but also their being shown in the so-called visible area of the SERP. Results that take up more space on the search results page or are graphically more attractive are more likely to be perceived and selected.

In Figure 2 we can see the discrepancy between the space taken up by organic entries and paid ones. This difference, however, isn't always noticeable to the average consumer. In Pew's Search Engine Use Report, Purcell et al. (2012) found that 66% of search engine users found them fair and unbiased sources of information. This trust is not based on knowledge of the way search engines index and rank websites. In a 2005 report by the same organization, it was found that only 38% of US Internet users were aware of the distinction between sponsored links and organic links. As a pro-profit enterprise, search engines not only serve the interests of the public but also that of various companies and brands. By using PPC, both websites that wish to expose their content, and search engines benefit from highlighting targeted marketing strategies. For search engines, sponsored links are the primary, if not the only, source of revenue. For advertisers, sponsored links provide reliable results with guaranteed placement, instant traffic, and easy-to-calculate return on investment (ROI).

But this strategy isn't always the most beneficial for smaller enterprises, that do not possess the financial means to pay for such marketing campaigns or for less-informed consumers, who are getting influenced to purchase items not based on quality or relevance for their search query but based on financial interests instead.

Nonetheless, with users becoming more aware of these marketing methods and search engines having to identify paid advertisements on their pages, the barriers to this strategy continue to grow. When studying the changes in user behaviour regarding SERPs, we can see that with the alterations in the search result display, which now includes paid ads, featured snippets, related images, local search results etc., the user's gazes have also shifted.
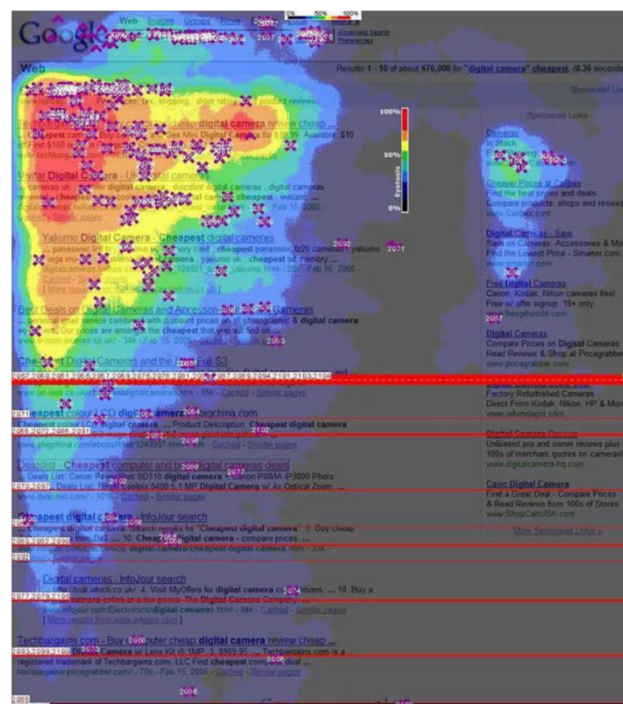

Figure 3 Eye-tracking map

Source: https://bit.ly/3NM0k1B

Figure 3 shows us that in 2005 the eye heat map shows concentrated gazes focused on a triangle shape starting in the top left corner, where the organic search results were displayed. Back then, if a website was in the "Golden triangle" it would have a very high probability of being visited (Egerton, 2017).

Figure 4 Eye-tracking map 2

Source: https://bit.ly/3NM0k1B

In Figure 4, however, we can see that this has changed. In 2014, organic results were not always the first results as paid ads took the top spots, so people looked down on the SERP more vertically to determine which websites were ads and which were organic results. Depending on the search term, today's searchers scroll down the page vertically too, but more experience on the Internet allows them to filter the results more quickly and determine what is most relevant for their search queries (Egerton, 2017).

With this change in consumer behaviour, marketers are forced to find strategies to make their websites rank organically in SERPs and that is where the second type of SEM comes into play, SEO.

1.5. SEO

There are several definitions of SEO in academic literature. In general, it can be understood as tweaking a website so that it comes up naturally on SERPs. This involves designing it to be more "crawler-friendly", to increase the quantity and quality of traffic.

This marketing technique is particularly appealing to organizations, as the global agencies SEO services market is predicted to increase at a compound annual growth rate (CAGR) of 8.1 per cent from $37.84 billion in 2020 to $40.92 billion in 2021 (Markets, 2021). It's considered the most cost-effective marketing strategy (Bala & Verma, 2018), as organically earned visibility rather than paid ads are more permanent and more beneficial for brand awareness. Inbound marketing techniques create more successful and long-term results than PPC advertising methods. The most important part of inbound marketing success is that it is continuous and free. From this point of view, the long-term ROI of any SEO practise is very high.

The interpretation and implementation of individual techniques of SEO are complex. It continually evolves with the constant updates in the technology of search engines. The functioning of search engines has a direct influence on the techniques of SEO. The introduction of new techniques and the effectiveness of existing techniques are dictated by the working of search engine algorithms. Search engines are constantly improving their algorithms to bring the most relevant search results to users. Search engine optimization evolves with them. Combining web technology with business economics is of high importance for e-commerce.

The search engine's ranking algorithms and technology are developing constantly. Progressive and incremental changes are implemented every minute to improve the functionality of search engines. To provide up to date information and a good search experience to its users, Killoran (2013) states that Google adjusts its algorithm more than 500 times per year, with more than 200 factors in its ranking algorithm (Aul, 2018).

These attempts at making search engines more resistant to manipulation and delivering more accurate and relevant results have only been in place since 2007. Since then, SEO can't be implemented by simple changes and refinement, and it becomes real science (Hansell, 2007).

In this complex process, we can find common ground between distinct stakeholders, as highlighted in Figure 5. Searchers (first category of stakeholders) visit search engines (second category of stakeholders) to fulfil their information needs. Websites (third category of stakeholders) implement SEO techniques to be oriented for search engines' functionality and become visible in SERPs. Search engines connect the first and third stakeholders on their platform.
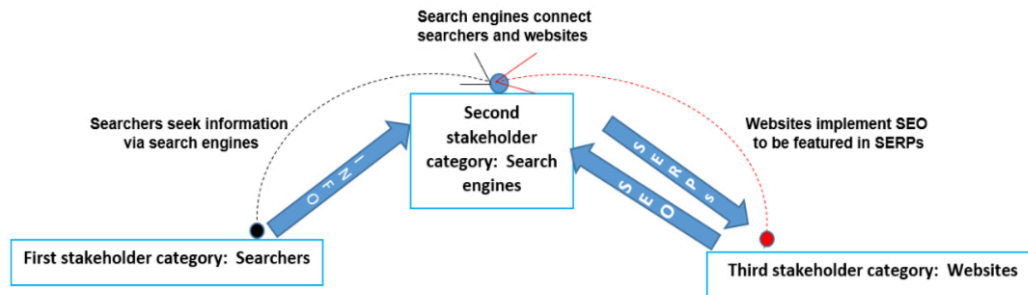
Figure 5 Search stakeholders

Source: Aul (2018).

When we apply this notion to a practical search example, we can conclude that the three identified categories of stakeholders are interconnected by keywords. In Figure 6 we can observe a case where the searcher inputs the keywords "education London PhD" and the search engine consults its database to determine relevant websites: "ucç.ac.uk, postgraduatesearch.com, gold.ac.uk". The websites listed in SERPs include these keywords in their title. Along with other techniques, the current research identifies keywords as the connecting point and specifies their implementation procedures. Websites can implement these techniques by following the implementation procedures for getting indexed and retrieved by search engines to answer the relevant keyword queries posed by the searchers (Aul, 2018).
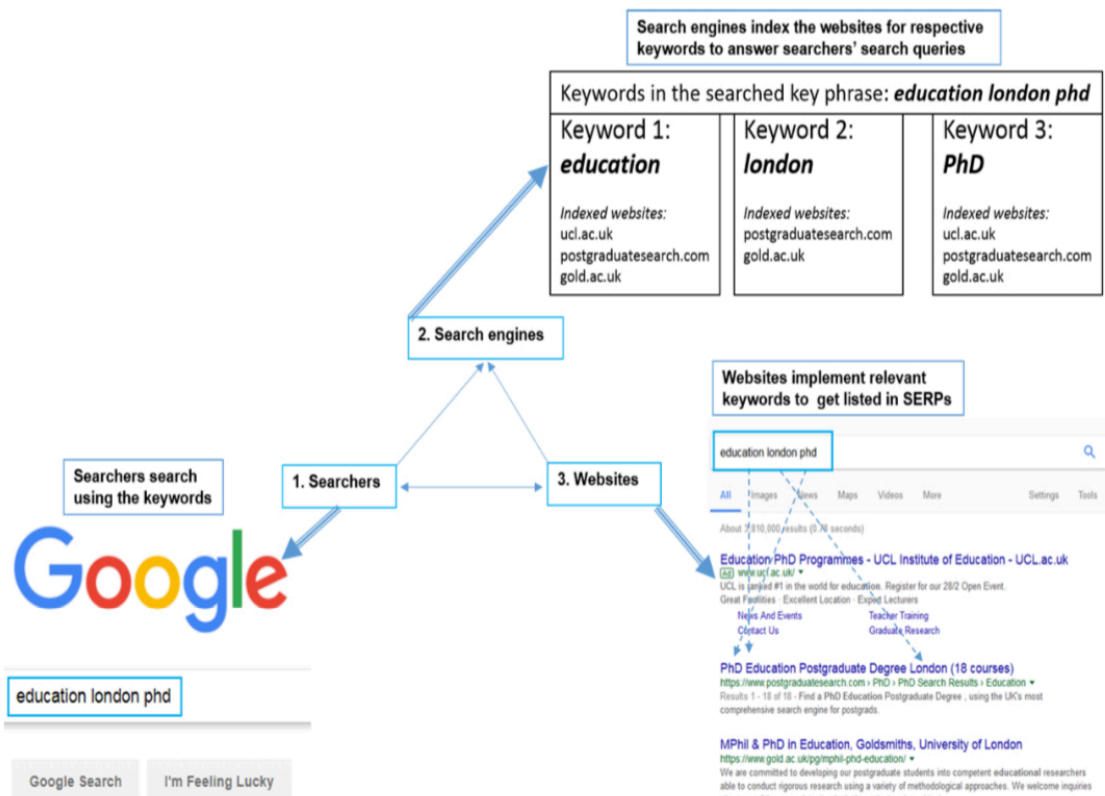

Figure 6 Keyword intersection points

Source: Aul (2018).

In Figure 6 we can also conclude that the relationships between stakeholders are not reciprocal. Search engines hold the power to change their ranking algorithm, and with that alter the entire industry. This means the SEO industry is based solely upon an ever-changing and undisclosed algorithm that lacks transparency and can be difficult to predict (Vieth & Bronowicka, 2015).

However, search engines such as Google do offer some guidance to webmasters and SEOs about recommended routes to optimizing a website through their "Quality Guidelines". The guidelines can be described as a compilation of best practice standards that SEO practitioners can choose to comply with or not. Not complying with best practice guidelines lays the risk of being excluded from Google's search results index.

Research shows that the velocity of change in the industry is inextricably linked to a practitioner's ability to adapt to new skills (Wilkins, 2015). Several techniques have been developed by search engine observers to account for and address the factors in websites that are favoured by search engines. Several papers have been published focusing on identifying the key variables of the search engine ranking algorithm, however, Volokh and Falk (2012) state that full transparency on all algorithmic processes and search engine ranking factors will likely never be achieved.

Despite the mystery surrounding the actual ranking factors, certain techniques are generally applied within the field. They can broadly be classified as on-page (textual component) and off-page (popularity component) (Shafiee et al., 2016).

1.6. The SEO Process

In simple terms, the SEO process consists of 6 steps:

Step 1: Topic website research
Step 2: Domain name selection and website setup
Step 3: Keyword research
Step 4: Data collection
Step 5: On-page SEO strategies implementation
Step 6: Off-page SEO strategies implementation

On-page SEO deals with anything companies have direct control over in the code or content of their website (e.g., text, headings, images, links, etc). It lays the foundation of all SEO efforts. Ochoa (2012) lists these techniques as the following:

- Title tag: defines the page title and communicated what the page is about to the search engines.

- Description meta-tag: provides a summary description of the webpage and its contents. In most cases, it appears just below the title.
- Use of robots.txt: gives directions to search engines on what pages or directories should be crawled.
- Optimization of URLs: making the URL text self-explanatory and self-documenting. The text of the URL gives the reader a brief description of the theme of the page's content.
- Content first: structuring web pages in a hierarchical way that follows a search engine's process (left to right, top to bottom).
- Heading tags: used to emphasize important text and inform the search engines how the page is organized.
- Images: using the image *alt* attribute to provide an accurate description of the image and help search engines and people with disabilities understand what's contained in the image.
- Use of the "rel_nofollow" attribute: defines the relationship between the current page and the page being linked to by the anchor. It signals web spiders not to follow the link.
- Keyword placement: optimization of the place of target keywords within the web page so the web page seems relevant to search engines and users.
- Sitemaps: provides users easy access to all key pages on the site and search engines with the structure of the website. It's a way to tell Google that pages exist on the website so they can get indexed.
- Keyword research: used to find and research search terms that users enter search engines when looking for products, services, or general information.

Keyword research and analysis not only drive traffic to your website but can also lead to the "right" traffic viewing your content. While more views can be a positive thing, the primary goal for websites is to receive views from their target audience or target market. This process is explained in more detail in Figure 7.
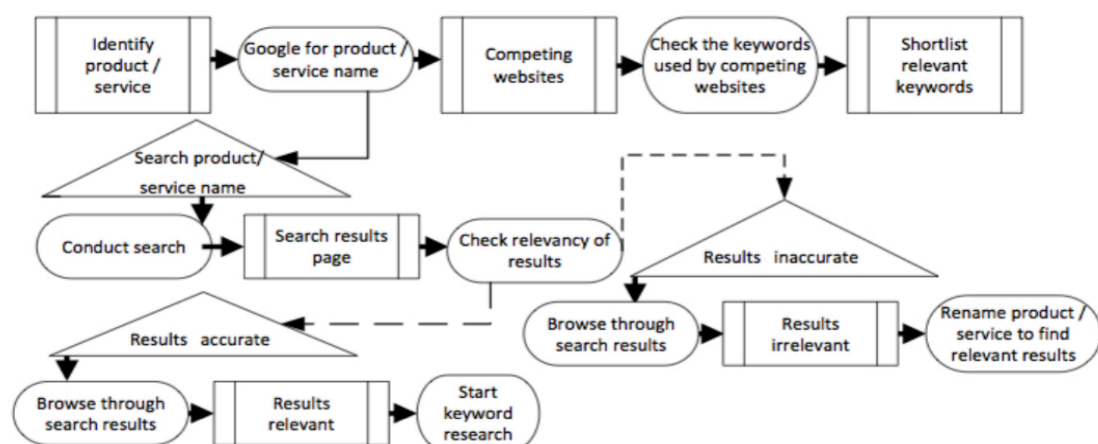

Figure 7 Keyword research process

Source: Aul (2018).

According to de Heesen (2022), too much repetition of keywords can result in a lower ranking website, as filters such as Google Panda penalize "low quality" websites and prevent them from ranking higher up on SERPs. If the keyword density is too high, it can trigger spam filters and result in penalties. So, the best approach is to include the appropriate keywords but make them appear naturally within the text.

Google algorithms are leaning more towards page relevance rather than keyword density now. Good content is an important element of on-site SEO. Crawlers can determine the relevance of your website to search terms, but high-quality content will attract people to the website, thereby increasing click-through rates and increasing the time spent on the pages. There's not much point in utilizing SEO techniques to rank highly in SERPs only to have poor content that users do not want to view, as this will over time decrease the website's ranking anyway. Bounce rate is the term used by Google when a user clicks back and navigates away from content after only viewing one page for a short time.

Webpages should also be user-friendly and easy to navigate, with the information presented clearly through easy-to-use menus and site navigation. Optimization for mobile-friendly websites is currently an important factor for improving user experiences, so redirects to mobile versions of all pages should be in place. According to Egerton (2017) Mobile SEO Guide, smartphone users have a higher buying intent than desktop users.

Page load speed is another significant factor in providing positive user experiences, so image and text selection should be made with this in mind. If a website takes too long to load the user will often press back and try a different website, especially today when everyone is used to high-speed internet and search results. The final component of on-site SEO is making content reliable and trustworthy.

The implementation of on-page techniques is a prerequisite for the effective implementation of off-page techniques (Post, 2021).

As opposed to on-page SEO which gets implemented on the website with high direct control, off-page SEO consists of all promotion that takes place outside of your website; it can be considered as the combination of all the things that can help your site get higher rankings. It's primarily focused on acquiring backlinks (links pointing to your site from other websites) from authority sites in a gradual manner and any technique that accomplishes this goal is a candidate off-page SEO technique (Ochoa, 2012).

Off-page SEO is an open-ended process and is more driven by the SEO engineer's creativity on how to achieve backlinks to the site. In contrast, on-page SEO is a more standardized set of technical procedures that can be studied and implemented on the site. According to Ochoa (2012), marketers generally focus on the following techniques:

- Importance of keywords in the backlink: Google's ranking algorithm places high value on the text that appears within the link since it gets associated with the page and describes the page it links to.
- Importance of gradual link building: the link building process should be natural and steady, for if a site were to acquire dozens or hundreds of backlinks overnight, Google would consider this a red flag.
- Importance of quality content: it's important to publish content people want to share, read, and link to. So, the content must be of high quality, unique, and provide value to the users.
- Writing articles to establish domain authority: getting articles published on other reputable sites is a strategy that can help a website get backlinks.
- Personal networking: reaching out to sites in a similar category and opening communication is often beneficial to promote and increase exposure.
- Finding a website's natural affinity group: finding websites that are related or cover similar topics and getting backlinks from them is more valuable than other links from unrelated pages.

The process of earning backlinks to your site is known as link building or link earning, and there are several ways to approach it. Firstly, publishing good quality content will naturally result in readers sharing links to your page.

There are other, less reputable methods of generating links, such as including your website's URL in your signature and posting in many different blogs or forums, or purchasing links from other, sometimes spammy, websites although these are less likely to carry as much value as real links from relevant sources. (Ochoa, 2012).

1.7. White-hat and Black-hat SEO

White-hat SEO refers to techniques, methods, or strategies that follow search engine rules and guidelines. These are not meant to deceive or manipulate the search engine or users in any way. It has also been called ethical SEO because it is implemented with the long-term in mind, by following correct guidelines and policies, your site will continue to appear in the search engine results and possibly top rankings.

The most common white-hat methods are:

- Directory submission: refers to creating incoming links to a website through related pages and categories.
- Keyword generation: a method used by every search engine optimization. The keywords are the necessary and most important part of SEO. These tools operate by entering one keyword and then the tool returns a huge number of keywords relevant to the website.
- Link exchange: placing your link on other websites and vice versa. There are many types of link exchanges used (illustrating interest directly on web pages, sending e-mails or discussion forums to show interest for link exchanges). Link exchange boosts website traffic.

On the other hand, the term black-hat SEO refers to those set of techniques that are meant to deceive, game, or manipulate the search engine's algorithm to gain high rankings. It's important to understand that these unethical methods are not approved by the search engines and implementing any of them runs the risk of your site getting removed from the search engine's database index altogether.

Performing black-hat SEO tactics can result in a sudden rise in the organic listings, but it may be a matter of time before the search engines determine the existence of shady tactics, which can result in the site can get penalized and be removed entirely from the search database index. Following are some of the most popular and more common black-hat SEO techniques:

- Hidden text or links: text or links that are the same colour as the background.
- Keyword stuffing: a form of search engine spam, when the spammer uses the target keyword in large instances all over the page with the hopes that the search engine finds it relevant.
- Doorway pages: low-quality pages that offer no value to the users. They are created with the sole purpose of ranking for specified keywords; once the visitor arrives at the doorway page, he or she is taken to the homepage or other pages where products or services can be promoted.
- Cloaking: presenting a page to the search engines and a different page to the users. The purpose of cloaking is to deceive the search engines into displaying a page that would not otherwise be displayed.
- Link farms: intend to create as many sites as possible, all of them linking to your site. The idea is to inflate the number of backlinks going to the spammy site to deceive the search engine into thinking it's an authority site.

One of the primary reasons for selecting what is essentially a poor SEO service is the promise of a high position and a large number of clicks in a brief time span. That is naive to expect because SEO is a process that should steadily increase the website's ranks. No one can now offer a number one ranking because today's search engines provide various results to different users based on their geographic region or tailored results. Rankings are a poor statistic for overall performance because the goal of having a strong website is to get more loyal customers, not to have many people who leave the page as soon as they access it.

Despite the risks and complications that can arise from procuring black-hat SEO methods, there are several examples of well-known companies being exposed for their devious practices. In early 2011, The New York Times published an article involving major retailer J.C. Penny (JCP), which was accused of using black-hat SEO methods to maintain top rankings for competitive keywords.

The article talks about how JCP outranked millions of other sites for popular searches such as "dresses", "bedding", and "rugs". For months, it was consistently in the top spots for 'skinny jeans,' 'home decor,' 'comforter sets,' 'furniture' and dozens of other words and phrases. It also states that JCP's website appeared on top of manufacturers' sites in searches for the products of those manufacturers. For example, whenever users typed Samsonite carry-on luggage on Google, JCP would appear at the top of the search results, ahead of samsonite.com.

This was possible because JCP had acquired thousands of backlinks to its site, with most of them being from unrelated pages. The article states that for the phrase "black dresses", JCP had a link inserted at the bottom of a site called nuclear.engineeringaddict.com. "Evening dresses" appeared on a site called casino-focus.com. "Cocktail dresses" showed up on bulgariapropertyportal.com. 'Casual dresses' was on a site called elistofbanks.com. And the list goes on.

In February 2011, the New York Times published a lengthy article that documented how the company had used questionable techniques to boost the ranking of its website in Google Search results (Costello et al., 2017). Rather than relying on its name and popularity, JC Penney had hired a search engine optimization (SEO) firm that bought and traded links from thousands of unrelated websites to JCPenney.com.

When Google's webspam team was confronted with the evidence, they suggested that an algorithm update had already been released to fix the situation. They further confirmed that they had temporarily applied a penalty to the company. By the 10th of February, the average position of JCPenney.com across 59 search terms had dropped from 1.3 to 52 before the penalty was lifted four weeks later.

The case of JC Penney highlights a common concern in the management of algorithmic systems: the problem of manipulating the system. As computer-generated metrics take on an ever more important role in ordering our lives, regulators, managers, and engineers are increasingly concerned about the possibility of outside interference. If those subject to these systems try strategically to manipulate the process to achieve more favourable ratings, it is argued, that the predictive power of these systems will deteriorate and disadvantage honest individuals.

With this and other practices becoming widely spread in the industry, there is a need for uniformization of moral standards and guidelines for SEO practitioners, with the intent of protecting those honest individuals.

1.8. Ethical SEO

Marketing ethics is normally described as the field that deals with the ethical principles behind the function and regulation of marketing. It is seen as a method to generate customer interest and affect their decisions to buy organizations' products and/or services (Majtán & Dubcová, 2008; Creyer, 1997). Practising ethics in marketing activities means applying standards of fairness and morality, to marketing decision-making behaviour and practices in the organization (Majtán & Dubcová, 2008).

Thus, to prolong the customer-supplier relationship, there is a need to apply the basic business ethics standards that seems to be efficient in reducing customer risk, reducing both transaction conflict and cost, reducing switching costs and efforts, increasing transactional benefits, and increasing customer satisfaction, trust, commitment, and loyalty (Alshurideh et al., 2016).

In that sense, ethics can be applied to each element of the marketing mix, namely, product, price, distribution, and promotion (Takala & Uusitalo, 1996). And equally, it can be applied to SEO, where the rapidly spreading practise of dishonest promotion and marketing acts and their harmful effect on an organization's reputation and success has forced organizations to change their business practices to be more aligned with ethical practices.

Consequently, for any business, there is a crucial need for an ethical climate that sharpens their behaviour and guides their processes. Business goals these days have shifted from being more focused on acquiring new customers to being more oriented towards customer-retention practices and prolonging the duration of the organization's customer-business relationship.

Adcock et al. (2022) identify the four contemporary approaches of marketing as relationship marketing, business marketing, social marketing, and branding. Regarding relationship marketing, Abela and Murphy (2007) conclude that having a relationship with the customer is a strategy to persuade firms to resolve and reduce ethical tension and prevent the development of unethical behaviour.

In terms of the application of this concept to SEO, maximizing a website's visibility in search results involves navigating the shifting boundaries between 'good' and 'bad' optimization. The ethicality of optimization has itself become a site of debate and contestation.

Although there is a "Consumer Protection from Unfair Trading Regulations" act, with an intent to protect consumers from unfair, misleading, or aggressive online marketing practices, this is only in the context of the following breach of law: "spam" ('unsolicited solicitations by telephone), "unclear advertorials", "targeting of children" and casual use of the word "free". Such areas are not relevant to the practice of SEO.

The Internet Advertising Bureau has begun to recognize the apparent need to regulate the Search industry, with the introduction of a "CAP code" for non-broadcast marketing and advertising. However, search regulation appears to focus exclusively on paid search techniques such as pay-per-click (PPC) with no concrete guidance on organic SEO. Instead, the SEO practitioner is offered the following information: "For policies related to Search Engine Optimization (SEO) – see the individual policies of Search Engines".

This continues to delay the problem of lack of regulation within the SEO industry, leaving the distinction between white-hat and black-hat practices to the moral conscience of each agent. And with such big and influential brands such as JCP recurring to less honest methods of marketing, it seems that ethical standards are easily lost.

METHODOLOGY

Having identified the key components of SEO and the application of ethical standards in this field by several authors in the previous section, I will now present my own research using a case study methodology. This will entail the analysis of several settings where white-hat techniques were used to optimize a website, both from published bodies of work and from my own data collection.

According to Mills et al. (2010), the purpose of a case study methodology is to either provide descriptive information or to suggest theoretical relevance. This framework can be divided into three categories (Yin, 2017):

- Descriptive: describe a phenomenon
- Explanatory: explain the reason for a set of actions or consequences
- Exploratory: identify relevant research questions for future studies

In this case, I will apply a descriptive methodology to compare my findings in a specific company to the findings of other authors. This study was conducted throughout my internship at a digital marketing company, where I was responsible for the SEO implementation on the company's website. Throughout the duration of my internship, I was authorized to collect quantitative and qualitative data from the several SEO strategies implemented and their outcomes. This will allow for comparisons with published articles and their findings, as well as verify the applicability of conclusions reached by different authors mentioned in the literature review section.

2.1. Research Question and Hypothesis Definition

The purpose of this analysis is to answer the research question: "Can SEO marketers achieve top rankings without compromising ethical standards?". For that effect, the initial research hypothesis, which tries to provide a provisional answer to this question, is:

H_1: "SEO marketers who practise ethical SEO can achieve top search engine rankings".

The goal of this study is to determine whether there is a relationship between increased visibility in terms of SEO and the practice of ethical marketing or not. This means I will be exploring the possibility of long-term growth in terms of search engine ranking and traffic of websites that employ white-hat techniques when compared to known cases of websites engaging in black-hat practices.

2.2. Data Collection

Firstly, it's important to understand the different types of data collection methods available, to choose the most appropriate one for this study. So, these can be divided into qualitative, quantitative, and mixed research methods (Williams, 2011). According to Paradis et al. (2016), qualitative research is employed when there is a problem whose answer requires human experience and context. It may also be aimed at challenging previous notions or incentivising future research.

In Paradis et al. (2016)'s research, the authors identified five key qualitative data collection methods:

- Surveys: open-ended questionnaires applied to a sample group, ideal to determine perceptions or beliefs.
- Interviews: one-on-one interactions to gather information from individuals.
- Focus groups: used when the group's experiences are more valuable than individual perceptions.
- Textual or content analysis: investigation of official, institutional, or organizational documents to understand a phenomenon.
- Observations: gathering data through the senses, by documenting routine practices and drawing conclusions.

Williams (2011) identifies three broad categories of quantitative research: descriptive, experimental, and causal-comparative. The descriptive research approach is a basic research method that examines the situation, as it exists in its current state. Descriptive research involves the identification of attributes of a particular phenomenon based on an observational basis or the exploration of the correlation between two or more phenomena. In causal-comparative research, the researcher examines how the independent variables are affected by the dependent variables and involve cause and effect relationships between the variables.

Mixed research methods, as the name suggests, involve using both quantitative and qualitative methods. Johnson and Onwuegbuzie (2004) hoped that the mixed methods approach to research provided researchers with an alternative to believing that the quantitative and qualitative research approaches are incompatible.

For this study, I will use a mixed data collection methodology, as it allows me to employ quantitative research methods to document and compare the evolution of the company's SEO strategy, as well as investigate other case studies from other authors, using a qualitative approach. The tool used to monitor my own case study during my internship was the SEO website "https://ahrefs.com", which provides marketers with easy-to-understand and instant statistics on their visibility growth.

EMPIRICAL APPLICATION: RESULTS AND DISCUSSION

3.1. Case Study Analysis

3.1.1. Case Study 1

Ho et al. (2010) conducted an experiment on an existing website, where they selected and applied SEO techniques over the course of a year and then analysed the results. The authors used the website "mymotel.com.tw" and selected "Janfusum" as their target keyword to optimize the site. In Table 1 we can see the metrics that were used to measure their evolution.

Table 1 Metrics for Case Study 1

Research Variables	Definitions
Number of visits	Total number of visits
Pages	Total number of files provided by the server after removing unnecessary files
Hits	Total number of files provided by the server
Bandwidth	Total volume of transmission
Ranking	Website ranking in the SERPs

Source: Ho et al. (2010).

To improve said metrics, they applied the following SEO strategies for their target keyword:

- The keyword was put in the HTML title tag
- Added keyword to the ALT property of the image tags
- Added keyword to the header tags
- Registered the website to an open catalogue website
- Directly submitted the website to the main search engines (Google, Yahoo and Bing)
- Inserted comments on popular forums that included the keyword
- Created a subdomain with the keyword in it
- Created a site map for the search engines

According to their research results, the application of the on-page and off-page SEO methods mentioned above moved the website higher in Google's rankings for the target keyword from the 14th to the 2nd position. They also found that the bandwidth also increased. Thus, this study shows the effect that white-hat SEO practices can have on website ranking and traffic.

3.1.2. Case Study 2

In another similar study by Ochoa (2012), a website was created from scratch with the purpose of measuring the impact of on-page and off-page SEO techniques. The author started by implementing several on-page strategies, such as optimization of meta-tags, URLs, web page content, correct usage of heading tags, images, use of "rel_nofollow" attribute, keyword placement, and sitemaps. After successfully putting these into practice, the author then focused on off-page strategies, mainly focusing on link building. This included applying to writing guest articles, contacting business partners, doing charity work in return for a link, asking friends and family for promotion, participating in the comments of authoritative websites, and attending industry events

The experimental website was launched in March 2011 and after one year of SEO activities and data collection, the following conclusions were drawn:

- Increase in the number of visitors by 353%.
- Increase in page views by 234%.
- Reaching the first page of Google's search results, occupying the 6th position at the end of the study for the selected keyword.

In accordance with the previous example, we can see the drastic impact that ethical SEO can have on a website's visibility, whether it's applied to an established domain or a brand new one.

3.1.3. Case Study 3

This case study is based on my internship carried out in a digital marketing company for the course of 2 months. During this time, I was responsible for the implementation of SEO strategies to a website focused on sustainability and renewable energy. Starting in March 2022, several off-page SEO techniques were implemented that consisted of:

- Guest article submission: contacting similar authoritative websites within the sustainability field and offering to write an article in return for a link insertion in their page

- Email marketing: using email finder tools to find relevant contacts within the area and promote our website and content
- Sniper and shotgun outreach: creating either personalized or standard messages, respectively, to contact possible partners
- Social media marketing: using platforms such as Facebook to share and promote content on the company's website
- Broken link building: searching for links in other websites pointing to deleted pages and offering replacement articles

As each of the listed techniques was implemented, their impact was recorded and measured using the online tool Ahrefs, mentioned previously. At the end of my internship, the final results were documented, and the data were divided into 6 metrics:

- UR: shows how strong a backlink profile of a target page is on a scale from 1 to 100
- DR: a measure of the quantity and quality of the backlinks going to an entire domain
- Organic keywords: total number of keywords that your target website, subsection, or URL ranks for in the top 100 organic search results in Google, across all the countries in the Ahrefs database
- Organic traffic: visitors that land on your website from unpaid sources, constituting essentially free traffic
- Backlinks: number of links pointing to your website from other pages
- Referring domains: number of links from your website pointing to other pages

After organizing all the data collection throughout those 2 months into those categories, we can clearly see an evolution in terms of link building and subsequent online traffic, as illustrated in Table 2.

Table 2 SEO metrics evolution

Date	UR	DR	Organic keywords	Organic traffic	Backlinks	Referring domains
01-March	15	8	1439	349	51	118
15-March	15	10	1457	375	75	130
01-April	16	11	1401	353	200	213
15-April	16	11	1450	523	208	226
30-April	18	13	1488	527	641	235

Source: https://ahrefs.com

We can see a steady increase across all categories, even with such as short timeframe. Both the number of backlinks and their overall quality increased by 1.156% and 62,5%, respectively. This shows us that the link building campaigns were effective in securing more backlinks inserted in other pages. This also translated into higher organic keywords and as represented in Figure 8, in higher organic traffic.

Figure 8 Organic traffic growth

Source: https://ahrefs.com

From this experiment, we can conclude that off-page SEO techniques can have a tremendous impact on a website's online presence. However, this growth may be slow and reliant on the quality of your connections, as we saw that the increase in the number of backlinks didn't fully translate into an equally better performance across metrics.

3.2. Results

Having analysed 2 case studies from other authors highlighting the results of white-hat SEO, along with 1 final case study documenting the outcomes of my internship, we are able to reach conclusions. When using strictly ethical means toward online visibility growth, my findings corroborate the ones of Case Study 1 and 2. In all three cases, there was an increase in traffic and search engine ranking, despite implementing different kinds of white-hat practices and having different timeframes for their application and measurement.

Most similarly, Case Study 2 and Case Study 3 both applied white-hat techniques to established websites and documented their impact. Even though the latter only focused on off-page SEO, whereas the former used both forms, both reached extremely positive results in terms of online traffic growth (353% and 51%, respectively). The main justification for a lower rate of traffic growth for Case Study 3 can be appointed to the shorter timeframe considered for this example. As mentioned in the previous sections of this paper, ethical SEO takes longer to yield results than black-hat practices. This means that to fully observe the impact of the SEO efforts made during my internship, data would have to be collected further into the future.

3.3. Discussion

In sum, the results from this paper are in accordance with the literature presented in the first section, specifically when it comes to the importance of building quality relationships with customers and partners (Abela & Murphy, 2007). We can see the importance of maintaining a strong brand image and creating meaningful connections in Case Study 3, where we concluded that having higher quality and relevant backlinks is more important than the overall number of backlinks obtained. This idea is also corroborated by Agrawal (2020).

In terms of the research hypothesis established: "SEO marketers who practise ethical SEO can achieve top search engine rankings", we can say that with the information gathered we can confidently say that it's a statement supported by this research. We can say that ethical SEO indeed has the potential to make a website reach higher visibility and top rankings, as observed in the analysed case studies. It's important to reinforce that this growth is steady and gradual and can mainly be observed in the long run.

The prevalence of unethical behaviours in the SEO industry is concerning, but marketers who seek to build long-term relationships with their customers are continuously pushed away from this business model due to algorithm improvements and customers becoming more and more informed.

CONCLUSION

This research paper consisted of 3 different case studies that showed the impacts of ethical and unethical SEO on website visibility. By analysing both quantitative and qualitative data obtained from direct observation and document investigation, we were able to find that white-hat techniques can provide a significant increase in internet traffic, even in a short amount of time. The conclusions made from this research are in accordance with the literature in this field.

In terms of limitations found in this project, we can say that the field of analysis isn't a representative sample of the entire SEO population, as it would require the use of a large-scale database of practices and results obtained.

For future research in this field, it would be helpful to have a database analysing SEO metrics over the span of several months, to properly understand the potential of ethical SEO and further encourage professionals to stir away from devious practices. Another relevant report would be on the long-term effects of black-hat practices, which measures how big the impact of search engine penalties can be for online businesses.

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