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CMS website Search Engine Optimization

Case Study: Europe-internship.com

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ABSTRACT

A content management system (CMS) is a platform to manage websites. CMS was first launched in the late 1990s. With the development of CMS platforms, more and more people are using them for their online businesses. As a part of online marketing, search engine optimization (SEO) plays an important role in online business.

The purpose of this thesis was to identify the key elements that can increase a CMS website's SEO ranking. On-Page and Off-Page optimization techniques are illustrated in the literature review section of the thesis.

Qualitative research is the main research method, and quantitative research method is a supplemental method to analyze numeric data. The researcher collected data by observing the Europe-internship.com website. After that, the researcher used two analysis tools to analyze the data.

Based on the analysis and the literature review, the researcher found that the case company applied more techniques than the researcher assumed. Moreover, link building and keywords are the main factors that help the case company to increase its CMS website's search engine ranking. However, companies should apply both On-Page and Off-Page SEO carefully, so that website might rank in the top of search engine results.

Keywords: Content Management System, CMS, online marketing, SEO, On-Page SEO, Off-Page SEO

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LIST OF ABBREVIATIONS

CMS	Content Management System
WYSIWYG	What You See Is What You Get
HTML	Hypertext Markup Language
WCMS	Web Content Management System
SEO	Search Engine Optimization
SERP	Search Engine Result Page
SEM	Search Engine Marketing

1 INTRODUCTION

1.1 Background

Online marketing has recently been incorporated into the traditional marketing mix and has evolved to become a crucial aspect of a business model. SEO as a part of online marketing plays an important role in online business. Effective online marketing provides accessibility and information for consumers so that they can peruse a diverse range of products and services easily and quickly. In addition, this marketing approach can offer a company a competitive advantage if employed correctly. (Chaffey & Ellis-Chadwick, 2012)

With the rise of digital technologies, online marketing has become increasingly significant as more and more people rely on Internet-based resources when making purchasing decisions. As of 2012, approximately 2 billion people worldwide can access the Internet and it is anticipated that this number will grow to almost five billion in the coming years. Thus, it is crucial that all companies establish an effective online presence (Armstrong & Kotler, 2012). The initial phase of online development generally involves designing a company website and most small or medium-sized enterprises should choose web content management system (WCMS) to facilitate this step.

CMS was first launched in the 1990s and hypertext markup language (HTML) code was used to compose content as the early versions required the use of tags and templates as a what you see is what you get (WYSIWYG) editor was not permitted. Later versions acquired a greater user interface and offered a WYSIWYG text editing feature, a search feature and an analysis tool among other new impressive resources. Thus, the later versions of CMS were appropriate for use as it provided a wide range of tools. (Shah, 2012)

However, modern day website construction relies on web-based resources along with a familiarity with HTML. WCMS is one such web-based software that facilitates the construction and maintenance of web-based content. This program is ideal as it has a comprehensive set of tools that can be modified easily by both non-professionals and professionals alike. WCMS also provides a diverse range of

tools to suit many unique functions, such as text, graphics, photos, video, audio, and so forth. (Shah, 2012)

Although the functionality of these programs is powerful; this is only the initial stage of online marketing and a lot more work must be completed to ensure business success.

1.2 Statement of the problem

A new grocery retail business was established in Helsinki in 2013 and it is located in a relatively small retail unit on the outskirts of the city. The managing director decided to establish an online web-store using WCMS and was awarded the '2013 Favourite Asian Market in Finland' prize after this company created its e-store. A similar enterprise attempted to emulate the business model but was ultimately unsuccessful as they failed to implement effective marketing strategies.

The initial phase of an online development plan requires the construction of a website and it is vital that this website is functional and attractive to users if the company wishes to maintain their competitive edge. However, although most businesses are capable of managing the WCMS, they lack the ability to manage search engine rankings.

In the modern corporate world, ineffective advertising is cost-intensive and fails to increase market position or brand visibility. Thus, this study intends to establish how companies can increase their CMS search engine ranking using a range of tools and resources. In addition, this study explores the key factors that affect ranking, which will be valuable to any company constructing a CMS webpage and wishing to become more adept at controlling search engine ranking.

This study adopts the design science approach, which begins by identifying the research problem and subsequently devising means to answer it. This method is focused on the problem-solving approach to innovation and uses current data on the research topic to identify an ideal solution to the research problem. Once this solution has been determined, the concept is developed further so that it is ready to be applied in a real-life situation. Following a trial period, an appraisal of the solution be carried out and further research can be conducted on the basis of the

outcome. Once the solution has been tested extensively and is performing effectively, the design solution has been determined and the research problem has been resolved. (Vaishnavi & Kuechler, 2013)

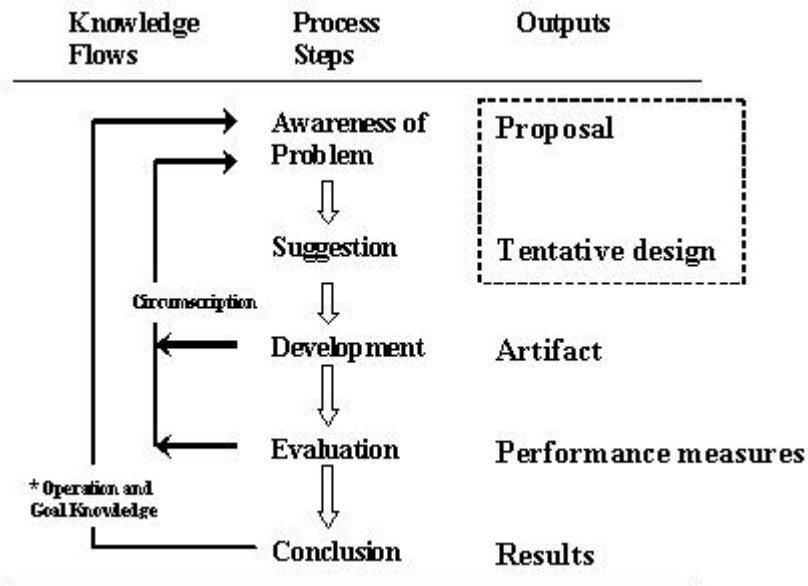


Figure 1: Design Science Research Process

This study proceeds as follows: a research problem is outlined and then a literature review is performed in order to ascertain the current state of research on the topic. Based on the findings generated through secondary research, a strategic model is designed and implemented by the case company, which conducts an appraisal of its efficacy. Based on the outcome and the performance of the model, the researcher compares a series of conclusions with the primary factors, finding out the most important factors that influence the search engine ranking of a CMS website.

1.3 Research Overview

This study is composed of seven chapters and opens with an introduction to the research problem. This section provides a contextual background to the study and outlines some of the main aspects of online marketing and the CMS software. Following this, an outline of the research problem is provided and a definitive research question is proposed.

Chapter Two explores the research methods used in this study and how they were applied throughout each stage of the research process, including identifying the

research problem, conducting secondary research, establishing a research model, collating data and analyzing the findings.

Chapter Three contains the literature review and outlines some of the most pertinent information on SEO discovered in previous research, including the significance of SEO and how it can be adopted to manage a website's ranking on search engines.

Chapter Four addresses the research problem in detail and provides an overview of the current strategy used by the case company in website management. The aim of this approach is to ascertain what the issue is so that the researcher can explore a diverse range of solutions in the following chapter. Thus, Chapter Five is dedicated to the research findings and provides a comparative evaluation of all possible means of improving search engine ranking and the most suitable methods are determined through a comparative analysis of a similar case study.

Chapter Six discusses the research findings and what approaches to CMS ranking were deemed most appropriate for the future company. The final chapter, Chapter Seven, discusses some of the research limitations, reliability and validity issues that must be taken into consideration. Finally, a series of recommendations are provided.

The following figure (Figure 2) shows the structure of the thesis:

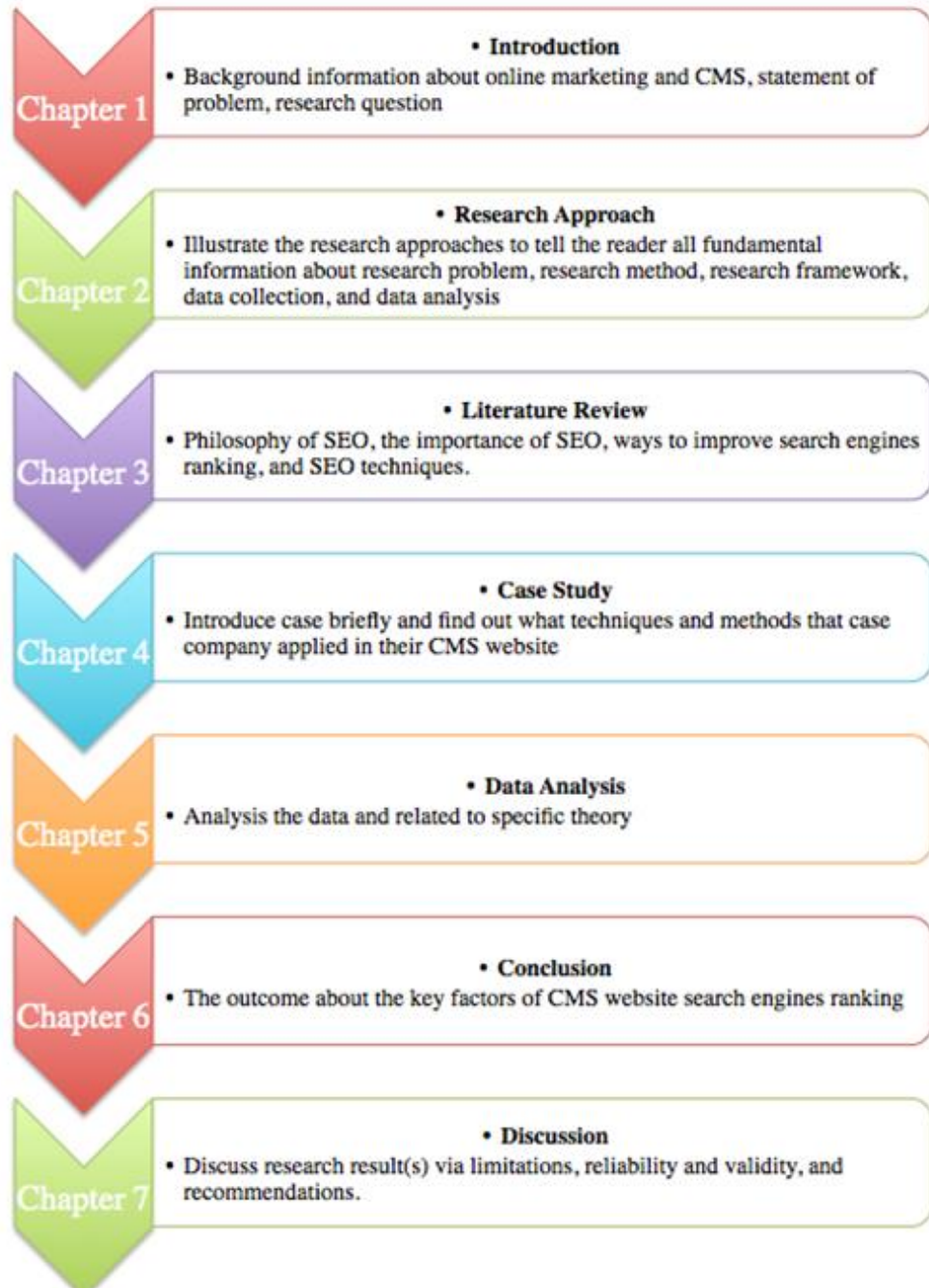


Figure 2: Research Overview

2 RESEARCH APPROACH

2.1 Research Problem

This study focuses on the primary factors that can influence how high a company website ranks on search engines and aims to assist enterprises in enhancing their online strategies in order to improve performance. Based on the objectives, the study research question is: What are the key elements which can increase a CMS website's search engine ranking?

2.2 Research Method

There are two main research approaches often mentioned: induction and deduction. An inductive approach uses observational data to generate a more general theoretical estimation of a problem while a deductive approach follows a more conventional pattern where a conclusion is drawn based on the validation of the proposed hypotheses. (Ketokivi & Mantere, 2010)

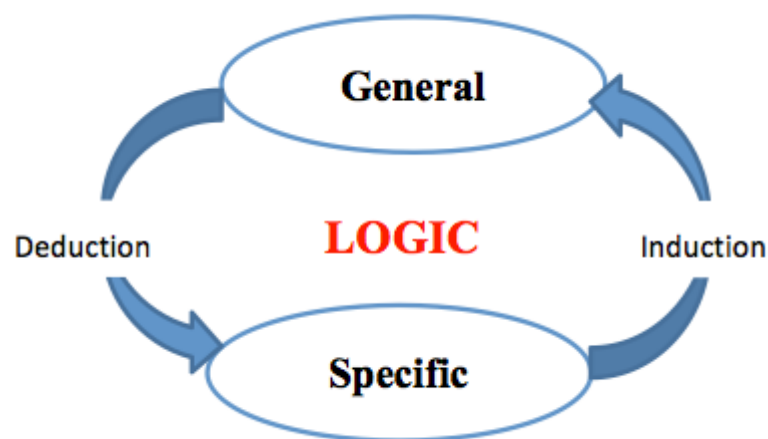


Figure 3: Deduction and Induction

In this study, the research approach of this study is deduction, and the nature of this study is the explanation. The researcher identifies the key factors from all the resources, and learns from the case study. In the end, the researcher compares the case study to a literature review. In addition, according to the research objectives, the purposes of this study as a means of influencing search engine ranking of a

CMS website and explanation research emphasizes on studying a problem and explains the relationships between one or two various.

Quantitative research typically refers to the collation of empirical information through completion of surveys or statistical analysis. Conversely, qualitative data is less structured and is acquired through verbal interaction or the interpretation of quantitative data. If one of these methods is adopted, the research process is defined as a mono method (See Figure 4) and it is generally more advisable to adopt the multiple methods. Multiple methods involved in multimethod and mixed methods (Saunders, Lewis, & Thornhill, 2012). Saunders, Lewis, and Thornhill (2012) define multimethod research as follows:

“In multimethod research more than one data collection technique is used with associated analysis procedures, but this is restricted within one data collection technique is used with associated analysis procedures, but this is restricted within either a qualitative or quantitative data using.”

For instance, a multi-method quantitative approach would involve interpreting empirical data using qualitative techniques; similarly, a multi-method qualitative approach would involve collating data qualitatively through interviews or written accounts and then interpreting it using quantitative techniques. Moreover, Saunders, Lewis, and Thornhill (2012) also introduce mixed methods as below:

“In mixed methods research both quantitative and qualitative research are combined in a research design.”

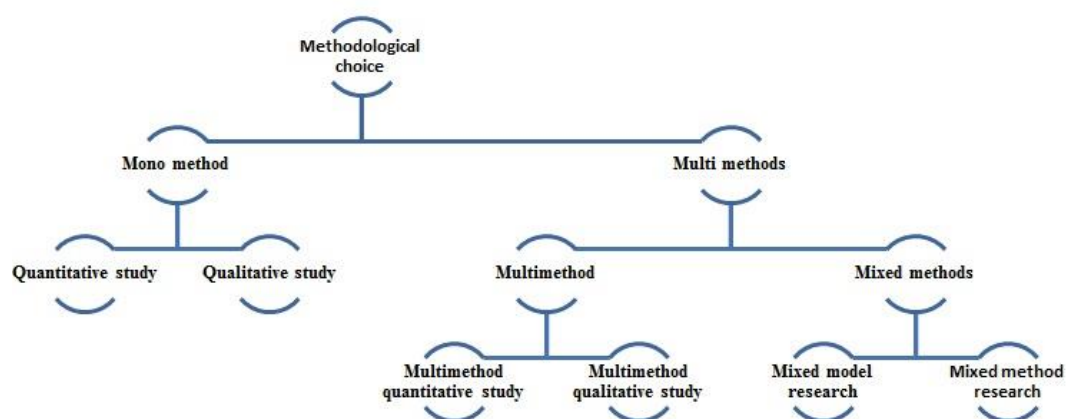


Figure 4: Methodological Choice (Saunders, Lewis, & Thornhill, 2012)

For most researchers, the qualitative approach is considered more interpretative and meaningful as data must be analyzed in order to assign a contextual and perhaps subjective meaning to the topic in question. (Denzin & Lincoln, 2005). Conversely, the quantitative approach is perceived as more logical and empirical as defined theories are evaluated and validated by definitive data. (Saunders, Lewis, & Thornhill, 2012)

Based on these distinctions, this study uses a mixed-method approach by integrating a range of both qualitative and quantitative research techniques. Both approaches are used to evaluate the theoretical aspects of the study and quantitative techniques are employed to determine correlations between variables and to interpret empirical data using statistical analysis tools. Qualitative techniques are used to analyze the data more abstractly in order to construct a conceptual research model that guide the direction of the research process. (Saunders, Lewis, & Thornhill, 2012)

2.3 Research Framework

In this research framework, the concepts are based on the background information, the literature review and the case study. The first concept is CMS, which is widely applied in blogs and commercial and non-commercial websites since CMS helps organizations and individuals to reduce time and costs, and manage websites easily.

The second concept is SEO which is related to online marketing, and it plays an important role in online business. It is also an important part of search engine marketing (SEM). Based on the concept one and concept two, concept three – ways to improve search engine optimization gives some basic ideas about how to improve SEO.

The fourth concept emphasizes the detailed techniques that can be used to increase SEO. Finally, the concept five identifies factors that derive from the case study. Based on these five concepts, this research framework can answer the research question – what are the key elements which can increase a CMS website's search engine ranking? (See Figure 5)

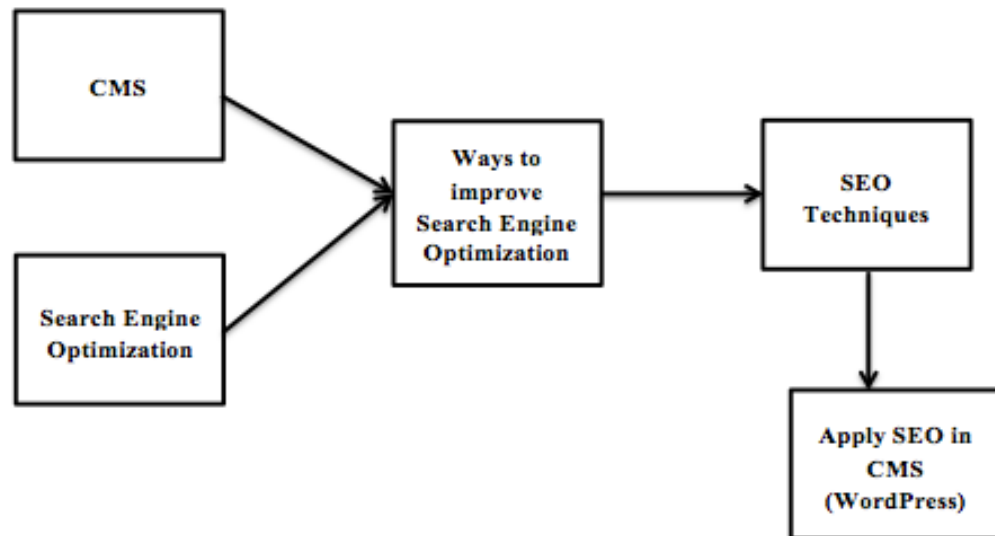


Figure 5: Research Framework

2.4 Data Collection

Data can be gathered in numerous ways and is referred to as either hard (empirical data and statistics) or soft (interview data or observational notes) depending on its nature. Qualitative research generally involves four stages: participation, observation, questioning and interpretation.

This study is focused on determining the primary factors that influence a website's search engine ranking. Therefore, interview and observation are the ideal methods that can help the researcher to be consistent with the research question and objectives.

A qualitative research interview is defined as follows:

“A qualitative research interview seeks to cover both a factual and a meaning level, though it is usually more difficult to interview on a meaning level. (Kvale, 1996)”

In addition, as Saunders, Lewis, and Thornhill (2012) state that interviews include standardised and non-standardised interviews. Non-standardised interviews involved in one to one and one to many. (See Figure 6)

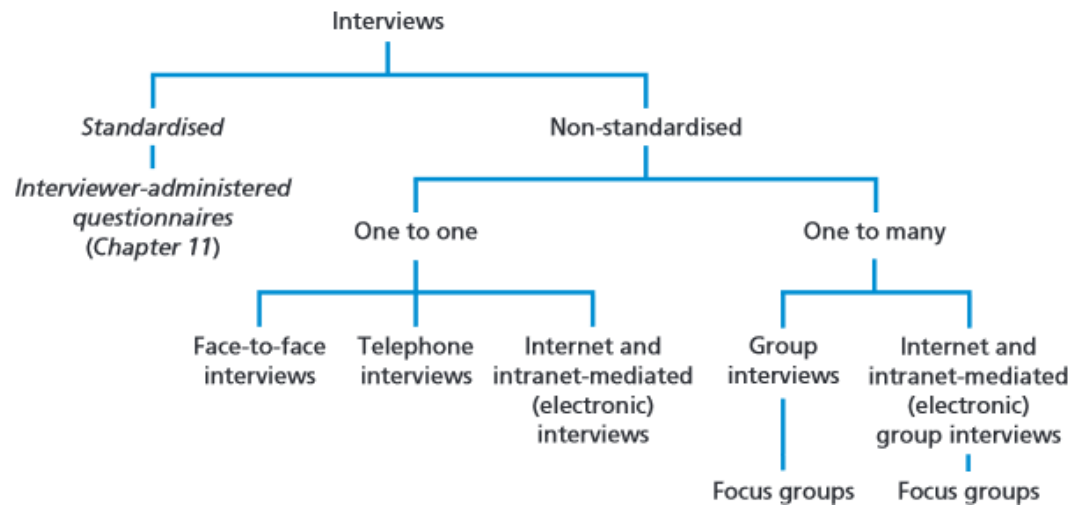


Figure 6: Forms of Interview (Saunders, Lewis, & Thornhill, 2012)

Moreover, Saunders, Lewis, and Thornhill (2012) mention that interviews can also be categorized as structured interviews, semi-structured interviews, and unstructured or in-depth interviews.

In this study, face-to-face interview is used to collect primary data. Unstructured interview is used to ask the interviewees open-ended questions. Saunders, Lewis, and Thornhill (2012) reveal that structured interview is used to explore a general area in depth. The researcher must have a clear idea although questions are not predetermined. However, open-ended questions can help the researcher to get basic ideas about SEO techniques that the case company has used in its CMS website.

Furthermore, according to Westat (2010), the observation stage is valuable as it can generate more in-depth data and can allow the researcher to become more familiar with the content from a more contextual perspective.

Observational techniques are ideal for this study as they can be applied to ascertain whether or not the study is progressing effectively. In addition, observational techniques can imply if the original hypotheses appear to be well-grounded (Westat, 2010).

Gill and Johnson (2010) define participant observation as follows:

“The researcher attempts to participate fully in the lives and activities of members and thus becomes a member of their group, organization or community. This enables the researcher to share their experiences by not merely observing what is happening but

also feeling it (Gill & Johnson, 2010)”

Moreover, Gill and Johnson (2010) propose that there are four unique kinds of observational analysis methods, each occupying a unique dimension. (See Figure 7)

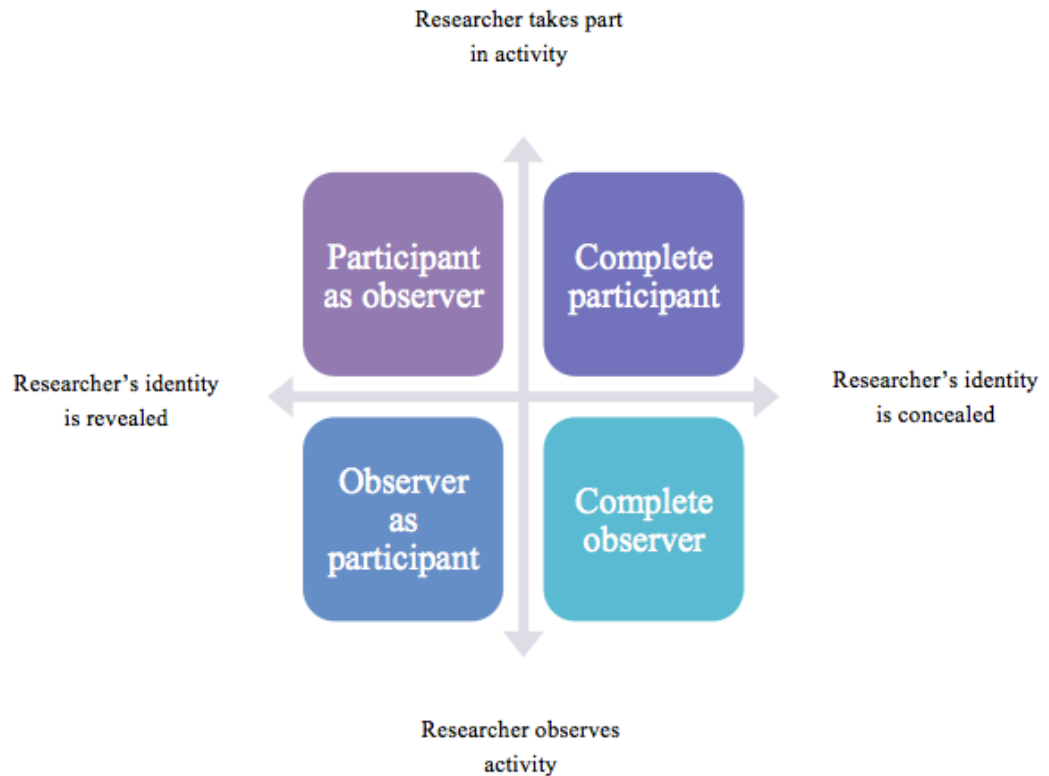


Figure 7: Typology of Participant Observation Research Roles (Gill & Johnson, 2010)

Based on this model, the complete observer is integrated into the research activity and their identity is concealed. Conversely, the participant as observer is clearly identified as the researcher to the group. The observer as participant conducts their analysis openly and the complete participant forms part of the actual research group and their identity as researcher is concealed (Westat, 2010).

In this study, the researcher collected data during the practical training, and the researcher worked as a member of the case company. Thus, based on the above model, the researcher has chosen to act as participant as observer.

2.5 Data Analysis

The information derived from observational research should be interpreted immediately and may be analyzed using a mix of both qualitative and quantitative

methods. (Saunders, Lewis, & Thornhill, 2012) As this study adopts the mixed-method research approach, data is interpreted twice using each approach.

The first approach is coding analysis. Coding is a data analysis method in which going to mark a meaningful segments are marked with symbols or category names. Coding analysis is used to categorize qualitative data and then describe the implication and details. (Trochim & Donnelly, 2006)

The second approach is to use two analysis tools called Traffic Travis and Alexa to analyze the data from every webpage. Traffic Travis examines the full website SEO health, and Alexa analyzes website SEO health from 22 important aspects. The detailed audit aspects can be found in the appendices.

In this study, the researcher first uses coding analysis to categorize the data collected from the interview. The researcher then uses analysis tools to get more details about the case company's website. In the end, the researcher describes data implication and details.

3 LITERATURE REVIEW

3.1 Philosophy of SEO

The Internet is now a widely used resource and search engines are used as a means of identifying the most relevant webpages according to search terms or keywords. This is the only option for users who do not have a specific URL that they wish to visit. Thus, these search engines allow users to input a set of parameters and the engine returns a list of the most relevant results.

Todd Coopee (2000) was the first scholar to propose the concept of SEO. Coopee shows that search engines have become the top tool for retrieving and searching information on the Internet in the modern society. There is an increasing number of people who have used search engines to search for the information they need online. Coopee also argues that there is an increasing number of pages on the web, as more and more corporations become aware of the importance of online resources. However, it is difficult for those web pages to obtain and retain high rankings in search engines. More importantly, the organizations need to constantly make changes in order to increase their rankings on the search engines. Also, Coopee predicts that there will be a more severe competition for top search engine result pages (SERPs) as there will be an increasing amount of online content, and as a result, more and more users will need to use search engines for information search and retrieval.

Google, a crawler based search engine, as after typing a search term, Google will create the lists of search automatically. All the information 'crawl' the web, then users can search through the information they are looking for. There are three elements included in the search engines, which include spider, index and coding of each web page (Feng, Bhargava, & Pennock, 2007).

There is another search engine, human powered search engine that is also known as web directories, it is very popular as it is very simple to use with higher quality. The links submitted and handpicked sites have been included in the index (Feng, Bhargava, & Pennock, 2007).

A recent study showed how online content can affect its chances of achieving a high ranking in search engine results (Dimitroff & Zhang, 2005). Dimitroff and Zhang confirmed the assertion made by Coopee in regard to the rising number of people who use search engines when navigating the Internet. In addition, they posit that both commercial and non-commercial businesses stand to gain from effective use of SEOs. The first section of their study investigates the impact on search engine results of using duplicated keywords and also discovered the importance of entering relevant keywords if a specific company wished to obtain a high ranking result. However, perhaps the most significant finding of the study was that ranking improved with the use of duplicated keywords on the webpage but declined when duplications in excess of three were used. Thus, based on this discovery, it is clear that keywords must be chosen carefully and used sparingly in order to achieve a high ranking. Furthermore, it demonstrates that the use of duplicate keywords in the title page is largely ineffective.

3.2 The Importance of SEO

SEO is understood as a process that facilitates the identification and generation of relevant search engine results. Ingwersen and Järvelin (2005) posit that this process mirrors the search engine process and can be defined as the identification, classification and presentation of the most relevant results based on the input parameters. In fact, SEOs are influenced by the activities of online users and the behavioral tendencies of online users can affect how they operate and how they generate data.

In addition, this also has an impact on search engine operation and it has been proven that these tools are a fundamental part of the identification and representation of online data. Thus, the SEOs must be evaluated in terms of their impact on search engine operation and also according to their impact on Internet users as they play such a key role in the searching process.

Contemporary marketers now incorporate SEO into their marketing strategies. In recent years, the construction of company websites has developed rapidly and now companies can easily create online content and publish it in a matter of days by buying a domain name and using CMS software to generate content. Furthermore,

this process requires no specialist knowledge. However, once this stage is complete, it is imperative to engage in effective marketing so that the website gains visibility and appears in search engine results. In effect, this stage is the most crucial as companies must use SEO wisely in order to disseminate brand knowledge and increase corporate visibility. (Rognerud, 2011)

SEO was revealed to be the most significant digital channel by a survey conducted in 2012 and demonstrated the highest level of impact on both B2B and B2C enterprises. These results were even more impressive than the results generated in the previous year (See Figure 9). Thus, by 2012, 59% of B2B executives claim that SEO has the most powerful impact on the lead generation. In terms of B2C companies, 49% believe that SEO is the most powerful digital channel. (See Figure 8)

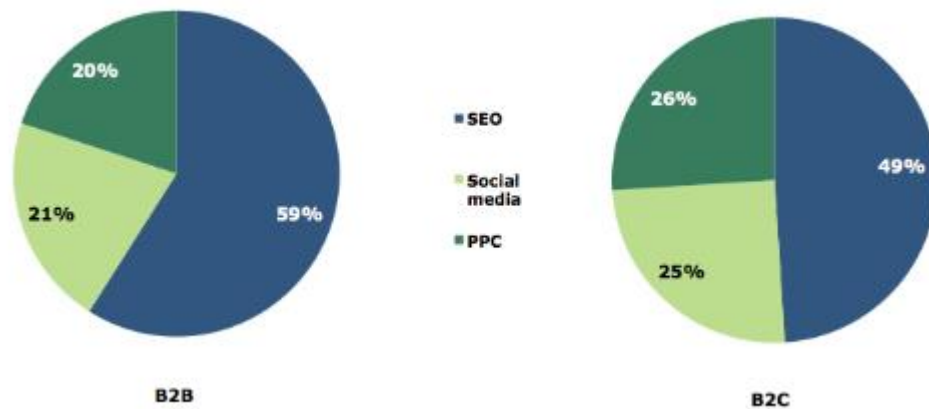


Figure 8: Digital Channel with Biggest Impact on Lead Generation (Marketing Charts, 2012)

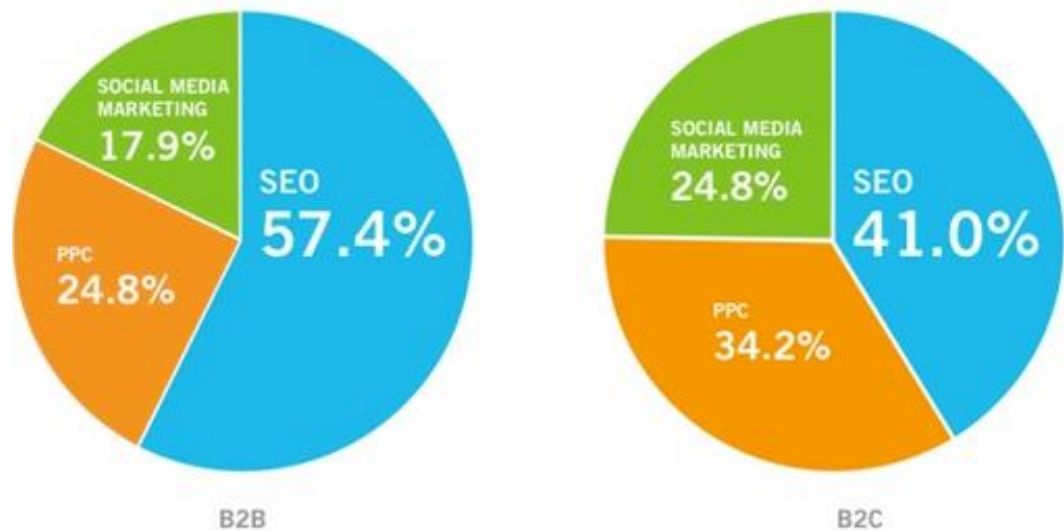


Figure 9: SEO Tops for Lead Generation Goals (MarketingCharts, 2011)

3.3 Ways to Improve Search Engines

In order to learn how to use SEO effectively, it is advisable to first understand how search engines operate (Google, 2010). Firstly, the search engine enables a network of crawlers that are automated indexers, which collect webpages and collate them into a database. When you enter some keywords into the search engine toolbar, these keywords are applied to the database and an algorithm identifies the most relevant matches to the search, which are then listed in descending order of relevance (White, 2009).

These search engines are user-friendly and do not cost anything to use; in addition, they are objective tools that represent information impartially and without bias (White, 2009). In effect, these search engines generate accurate data that is not filtered by subjectivity or any other ulterior motives. However, this may not be an accurate representation of search engine activity, particularly as they are now used as one of the primary marketing resources in commercial business. In addition, it is important to question their lack of bias as they have become a weapon of choice for many modern advertising executives.

As search engines are now commonly used marketing resources, a significant amount of research has been dedicated to the marketing benefits of search engines and how they can be used to facilitate promotional campaigns, advertising

strategies, and so forth (Heinze, 2010). According to Heinze (2010), the most fundamental purpose of these search engines is to identify the most relevant websites based on the parameters applied by the search engine user.

Karimzadehgan (2012) outlines a means of enhancing search engine's ability to respond to more complex search terms. Based on his findings, it has been discovered that an improvement in vocabulary range can enhance the relevance of search results. Many complex search terms can be confusing for search engines as the keywords lack relation and more defining words are required. In addition, these tools can be improved through consideration of user evaluations and Karimzadehgan asserts that the input of users is highly valuable in developing advanced SEO systems. Based on this, a more sophisticated SEO system is likely to be developed in the coming years.

Schwarz (2008) looks at ways of improving the functionality of SEO and evaluates the systems as they currently operate. Based on his research, he posits that no definitive method exists that guarantees a high ranking in any search engine but the use of HTML titles and keyword title tags most definitely contribute towards a higher ranking. As a result, approximately 95% of commercial enterprises use optimized title tags on their company webpages. In addition, relevant On-Page and Off-Page optimization techniques can also increase website search engine ranking.

The current SEO systems have been built to allow search engines to navigate through indexes more effectively and Berman and Katona (2010) assert that the main purpose is to avoid the prevalence of 'black hat' SEO, which uses illegitimate means of increasing website rankings regardless of the content quality or relevance.

McMahon and Griffy-Brown (2009) performed a survey to determine which particular keywords are optimal for their website and chose their list based on purpose, popularity and definitiveness. When users provided feedback on optimal keywords, these terms were duplicated in order to improve search engine ranking.

It is preferable for SEO strategies to be designed as part of the initial website framework though Evans (2007) posits that it is feasible to apply these strategies at a later stage when online visibility becomes a problem. In fact, it is crucial to maintain an effective SEO strategy long-term in order to be indexed appropriately.

In addition, online content should be modified regularly to promote a sense of interactivity and capture the interests of users.

3.4 SEO Techniques

3.4.1 On-Page SEO

SEO can either be On-Page or Off-Page and Elmansy (2013) defines On-Page SEO as a means of facilitating crawlers by maintaining relevant content and keywords so that the website is indexed appropriately and performs well in search engine rankings. This approach involves updating page titles, page content, URLs, ALT tags, and the like. The various CMS programs have different tools for performing On-Page SEO processes, including WordPress. (Williams, 2013)

- Website Design

Thus, On-Page SEO focuses on file names, codes and page content, including Meta tags, keywords, ALT tags, and so forth (Elmansy, 2013). It is vital for a company to maintain a coherent HTML code as search engine crawlers refer to this when indexing webpages. In order to enhance the efficacy of On-Page SEO, Elmansy recommends an optimal design process as is shown below(See Figure 10).

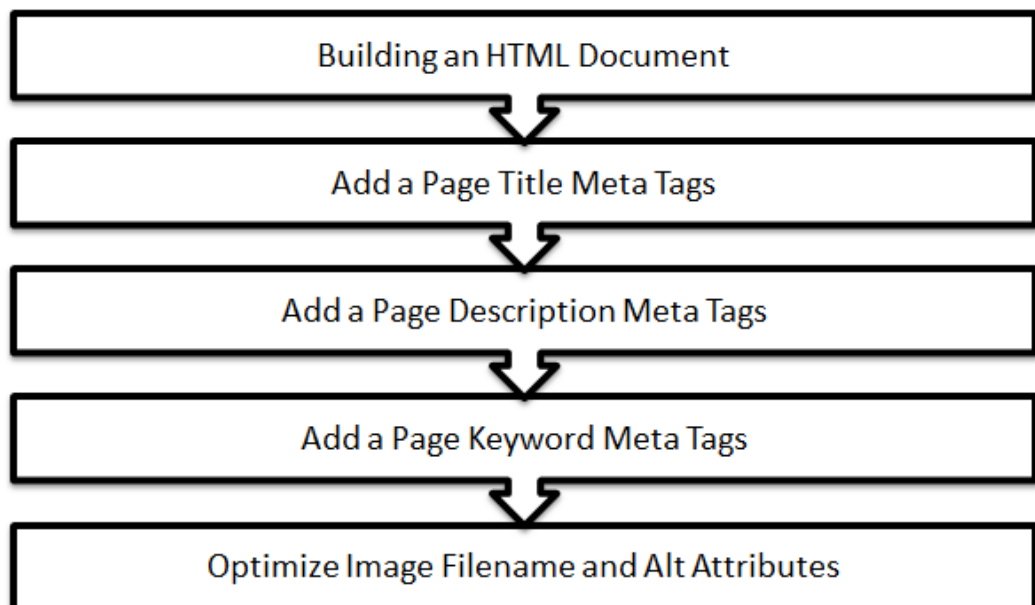
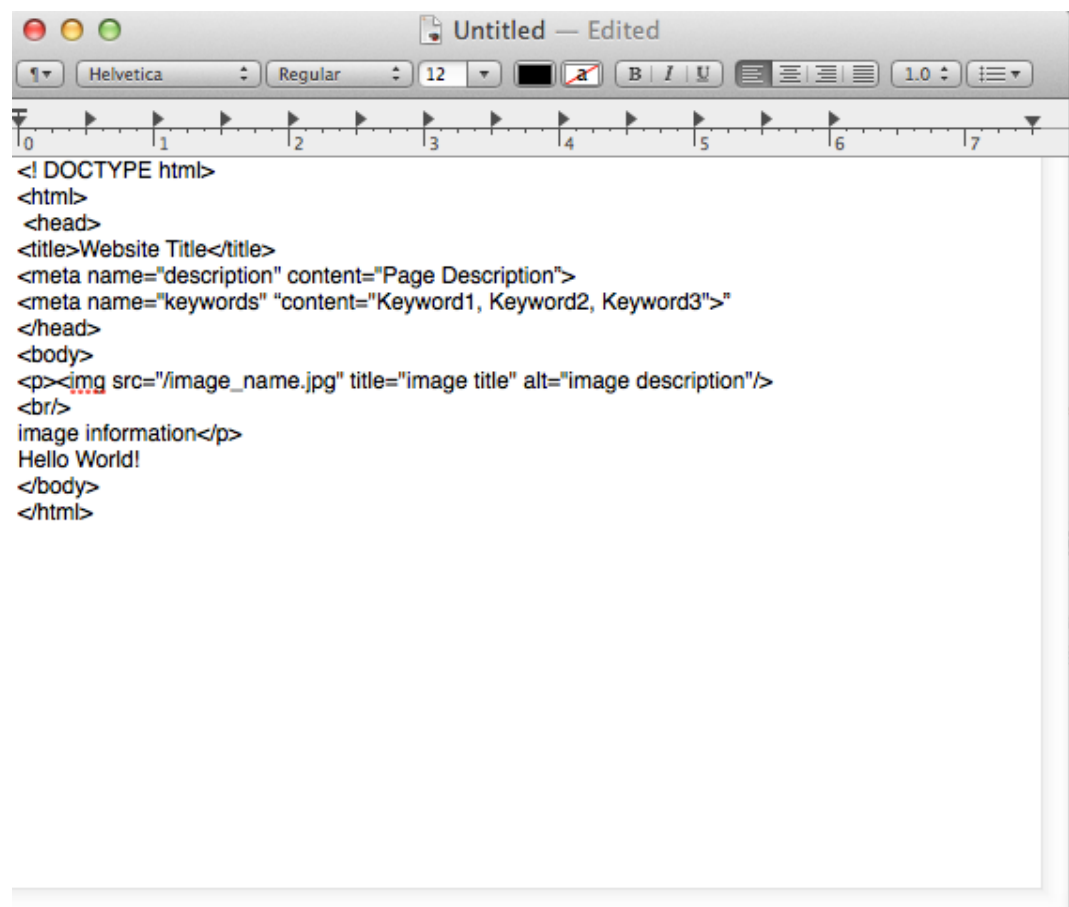


Figure 10: Optimize Website Design Process (Elmansy, 2013)

This optimal design process recommends the following series of actions: Construct a simple HTML file that contains <html> tag, <head> tag, and <body> tag.

Following this, it is imperative that a Meta tag is shown at the top of the HTML code following the <head> tag. Within the <head> tag are the title Meta tag, description Meta tag, and keyword Meta tag. The page description Meta tag is after the page title Meta tag and the page keyword Meta tag follows the page description Meta tag. (See Figure 11)

Furthermore, it is also advisable to optimize any images used so that they show up on relevant searches. Although the crawlers used by search engines do not index the images themselves, they do crawl the tags associated with images () and the relevant keywords. This is not an essential step in the SEO process but does contribute a great deal towards effective ranking and visibility in relevant searches. Thus, businesses should ensure that they also optimise image files and ALT attributes to increase the effectiveness of SEO and allow the website to be indexed and crawled precisely.



```

Untitled — Edited
Helvetica Regular 12
<!DOCTYPE html>
<html>
<head>
<title>Website Title</title>
<meta name="description" content="Page Description">
<meta name="keywords" content="Keyword1, Keyword2, Keyword3">
</head>
<body>
<p>
<br/>
image information</p>
Hello World!
</body>
</html>

```

Figure 11: Website Design HTML Code (Elmansy, 2013)

In addition, Elmansy (2013) asserts that search engine tools crawl the heading tags, which include H1, H2, or H3 tags on company webpages when indexing the site and assessing the content. Large heading tags indicate the importance and substance of website content (Fleischner, 2013). Moreover, one to three heading tags in one page is sufficient. Moreover, if H1 titles are the same as searched keywords, Google will rank the CMS website highly in its list of relevant results.

- URL Friendly

It is important to maintain a simple URL as long or complicated URLs will confuse search engines and cause indexing issues. According to Rognerud (2011), a precise and coherent URL structure contributes towards a more desirable search engine ranking. Furthermore, it is also advised that companies use relevant keywords within the URL so that crawlers can easily index the page and so that users can clearly distinguish between the different pages of a website. For instance, the example below contains a clear and definitive URL structure (See Figure 12).



Figure 12: URL-Friendly Structure (Vertommen, 2012)

Hyphens are also suitable for use in URLs and are useful in separating numerous keywords. For instance, the URL `http://domain.com/blue-skirt` is more descriptive and coherent than `http://domain.com/blueskirt`. However, the use of underscores or plus symbols are not advised, as are other forms of separating URL keywords. Thus, if a company designs a clear URL structure, the website can be easily crawled and indexed by search engines, which will contribute towards a much higher ranking in relevant search term query results.

- Title Tag, Keyword and Description

The title tag is designed to inform users and search engines about the content of a page and this tag will be written first in the generated list of search results (See Figure 13).

As a result, it is crucial that a company ensures that title tags are original, short and precise in its description of the page's contents. By using such clear and relevant title tags, users can rapidly identify the purpose and the content of the webpage. In addition, according to Enge, Spencer, Stricchiola, and Fishkin, companies must be careful not to exceed 70 characters in title tags as if they are any longer, crawlers will ignore the excess characters and instead represent them with ellipses (...).

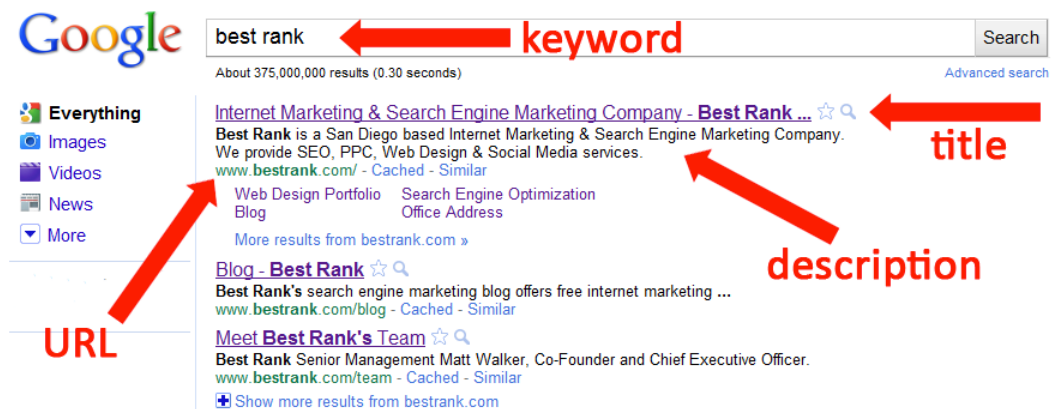


Figure 13: Google Search Engine Result Page (Thomas, 2010)

As a result of the importance of title tags, 94% of company websites have implemented optimized title tags on their home webpage based on the findings of a survey conducted by LIMRA International in 2007. In contrast, only 5% of websites surveyed failed to apply appropriate title tags while only 1% failed to assign a home page title tag (See Figure 14).

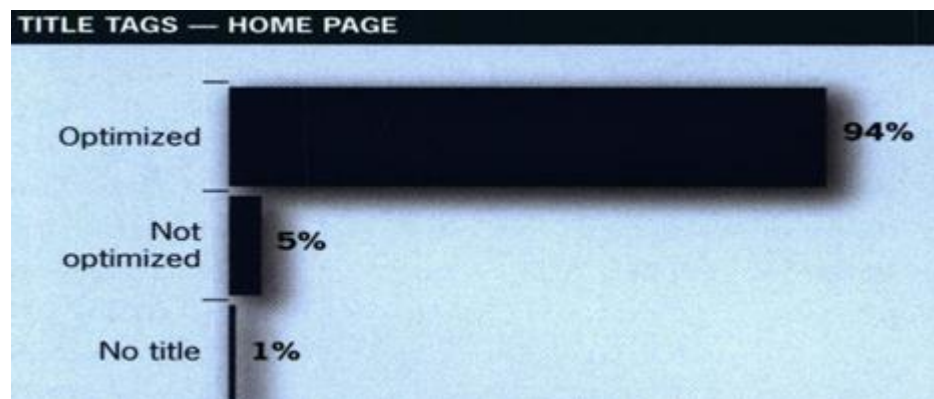


Figure 14: Dollars for the Taking: Use Effective Search Engine Optimization to Drive Customers to Your Web Site (LIMRA International, 2007)

According to a study by Malaga (2008), keywords are also a fundamental factor in SEO and must be used appropriately in order to obtain a high ranking in relevant searches. The keyword Meta tags are used by search engines to index the content and list it in relevant search queries. Thus, these tags must be relevant and expressive in order to achieve a high ranking and encourage a high level of traffic. It is recommended that only 2-5% of content be dedicated to the use of keywords as overuse is frowned upon and can have detrimental effects on the overall ranking of the website.

Rognerud (2011) also asserts that the number of keywords used should be between two and five, particularly well-known and meaningful one-word terms. Table 1 gives detailed percentages of searches by query length. These terms are always distinguished from each other by the use of commas. A website must choose its keywords carefully and ensure that they are relevant, clear and complementary to the content.

Words	Percent of searches
1	25.8%
2	22.8%
3	18.7%
4	13.2%
5+	19.5%

Table 1: Searches by Query Length (Enge;Spencer;Stricchiola;& Fishkin, 2012)

In addition, generic words should also be avoided as it is more beneficial to use words that have a direct relationship with the website content. Thus, when selecting appropriate keywords, it is useful to consider what words would capture the attention of the public and encourage them to view your company website. In fact, for new ventures, it is often preferable to choose terms from a single category as opposed to multiple terms from multiple categories (Elmansy, 2013). By doing this,

crawlers can index the webpages rapidly and a higher ranking can be achieved more quickly.

Also, Elmansy (2013) recommends the use of head term keywords and long tail words; the former refer to one or two-word terms that relate to the category of the website or the products and services on offer while the latter refers to longer keyword tags, such as 'summer jobs France'. This is based on the fact that the majority of Internet users will enter more than one search term when using a search engine; thus, this approach ensures relevance and increases specificity.

Thus, by using the most relevant, precise and specific keywords, a website has a much higher chance of showing up on the first page of Google results. Although not all search engines refer to these keyword tags but it is a useful strategy to have in place nonetheless.

A description is a Meta tag that is attached to the top of each webpage within the <head> tag. This tag is designed to imply what the page content refers to and search engines will refer to this tag when indexing webpages and displaying search results. These tags can be much longer than Title tags and up to 155 characters can be used to increase relevance and specificity. Again, it is important to use terms that relate to the website content.

The importance of this stage is well-known at this stage and a recent survey conducted by LIMRA International demonstrated that approximately 60% of businesses have incorporated descriptions and keywords into their website structure (See Figure 15).

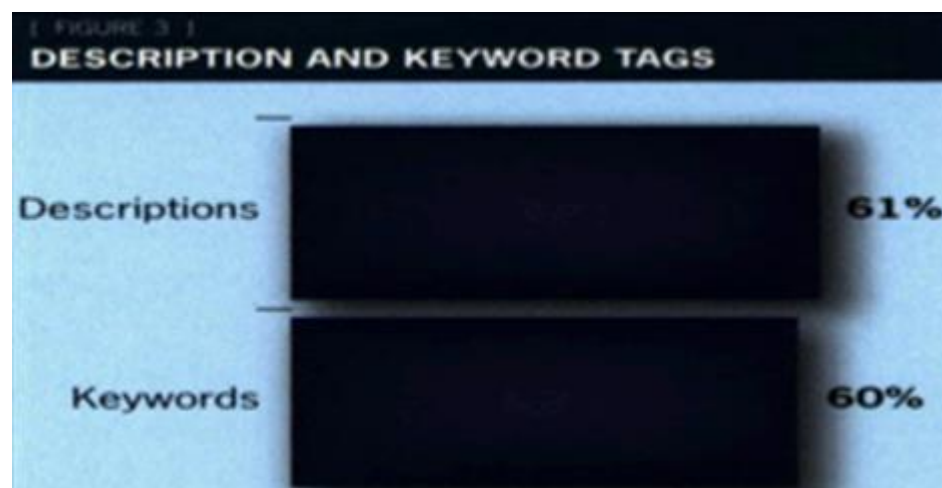


Figure 15: Dollars for the Taking: Use Effective Search Engine Optimization to Drive Customers to Your Web Site (LIMRA International, 2007)

- Inbound Links

Link building can refer to either inbound or outbound links and is overviewed by Malaga (2008) in his exploration of fundamental SEO factors.

According to Adams (2014), these are a crucial aspect of On-Page SEO and a well structured and relevant website layout will facilitate search engine activity. These Links and Breadcrumbs also make it easier for crawlers to navigate the site and index it appropriately. In fact, it has been reported that businesses achieve much higher rankings by implementing a strategic internal link network (Fleischner, 2013).

On a webpage, the provision of internal links helps the user to navigate through the main pages of the site and the home page typically contains the links to all ancillary content pages. For instance, if a clothing business was setting up a home page for the company, the home page would ideally provide links for the different categories of clothes available, such as shirts, pants, jackets, etc. (See Figure 16).

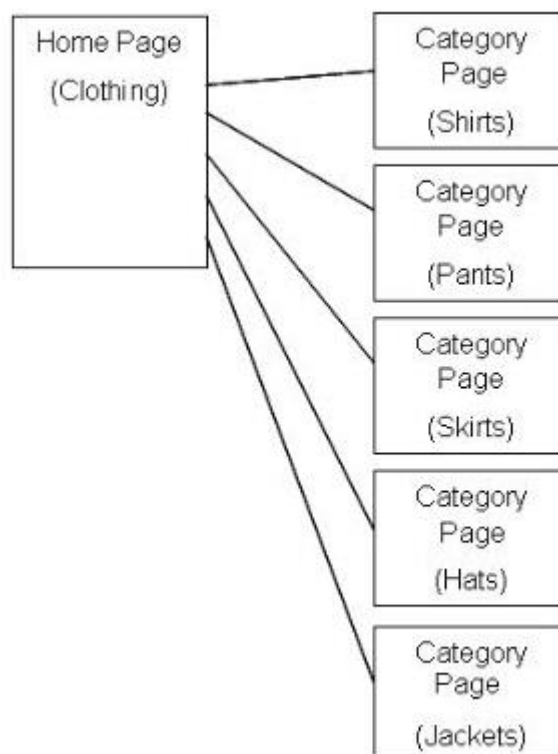


Figure 16: Internal Links Example (Fleischner, 2013)

Fleischner (2013) states that the use of keywords within these internal links can inform search engines of the page content, which can facilitate the indexing process.

Breadcrumb is a typical inbound link and easy to be ignored. A Breadcrumb is a hierarchical navigation that is designed to facilitate users and spiders to navigate between pages regardless of what page they are currently viewing. For instance, Figure 17 below outlines a typical Breadcrumb link structure.



Figure 17: Breadcrumb Bar on PetSmart.com (Engel;Spencer;Stricchiola;& Fishkin, 2012)

This breadcrumb structure is a crucial aspect of On-Page SEO along with the provision of internal links as they ensure that crawlers access all content so that the website can achieve maximum visibility.

3.4.2 Off-Page SEO

According to Elmansy (2013), Off-Page SEO is a required part of the optimization process as the use of a long-term domain name, updated content and relevant keywords is insufficient to enhance SEO alone. Off-Page SEO is designed to increase traffic and rank and refers to the use of external resources, such as social media sites, forums, blogs and links. Adams (2014) asserts that the primary objective of Off-Page SEO is to attract an increased amount of website traffic through the use of IP and keyword diversity. In effect, the generation of natural and legitimate backlinks is one fundamental aspect of achieving a high rank.

- Social Networking

These resources are used by people to communicate virtually and foster online relationships by discussing topics of interest, providing links, disseminating information, and the like. The social media phenomenon has grown rapidly in recent years and many websites such as Facebook, Twitter and YouTube now have a huge number of registered members. Elmansy (2013) believes that these platforms can be useful in SEO, albeit in a rather indirect way, by increasing website traffic and increasing online visibility. In addition, as these social media sites are used regularly by users, the provision of links on these sites will generate more traffic and spread awareness of the company, brand or organization. In fact, Google promotes the sharing of links and information between users and they acknowledge these factors when performing a search and identifying relevant results (Elmansy, 2013).

According to Elmansy (2013), it is best to interact with online users in an amiable and respectful way but he warns against using an overly informal tone. Furthermore, it is also recommended that websites generate updates regularly so that they would capture users' interest and increase website traffic. Although text-based content should always be prioritised, it is also important to make use of images and videos in improving SEO. In addition, the use of multiple social media platforms is the best way to increase visibility as each platform will be more focused on a different medium of content; for instance, Twitter is primarily text-based while Instagram is primarily image-based.

- Outbound Links

According to Malaga (2008), more and more external links exist on the Internet and link quality has thus become a primary concern in achieving a high rank in search engine query results. Dimitroff and Zhang (2005) support this position and have demonstrated the importance of appropriate keywords in allowing search engine crawlers to accurately search, index and rank each page.

The Google PageRank considers quality above all other factors (Langville & Meyer, 2006). In the past, search engines relied on the number of external links detected to determine rank but now these systems have been developed to overcome the issues that arose in relation to the use to excessive keywords to generate a higher rank. Furthermore, advanced search engines now determine the function and quality of external links before assigning a value.

Thus, the links must be operational and must be relevant, and Dover (2011) asserts how various forms of descriptive anchor content is implemented by websites to act as links to other webpages. This approach facilitates the indexing of the site by search engines as the appropriate content information can be derived from each unique webpage. In fact, research has demonstrated that a large number of external links received by the website leads to a higher probability that the search engines will correctly define the content when ranking the most relevant results.

Thus, a higher number of external links will inevitably lead to a website achieving a much more desirable search engine ranking. As a result of the importance of linking strategies, 62% of company websites have implemented linking strategies on their home webpage based on the findings of a survey conducted by LIMRA International in 2007. In contrast, only 38% of websites did not employ linking strategies (See Figure 19).

Linking (keyword text links)

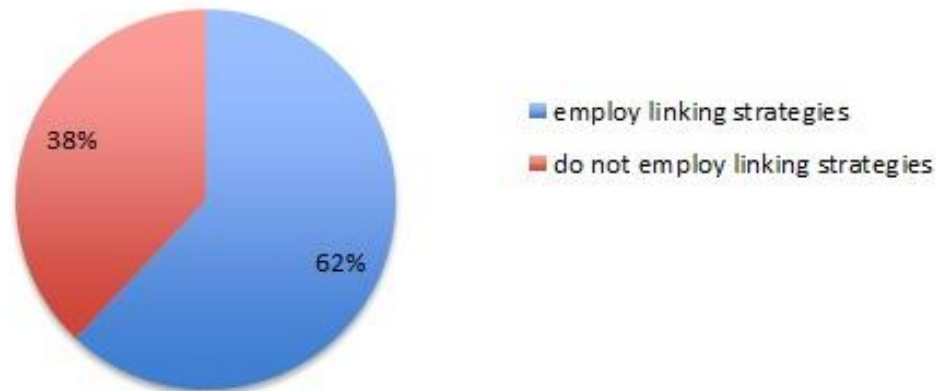


Figure 18: Dollars for Taking: Use Effective Search Engine Optimization to Drive Customers to Your Web Site (LIMRA International, 2007)

4 CASE STUDY

Case study is one of the main approaches for qualitative research. In order to outline the qualitative research design for this thesis, a case study is the essential method of qualitative research.

4.1 Case Description

According to the Google PageRank rating, Europe-internship.com is a successful example of CMS website SEO, so it was selected as the case study in this thesis. The case company Spain Internship SC is a service and recruitment organization located in Sevilla, Spain. It is a young but experienced company, providing global internships for students.

Europe-internship.com is an online platform and a business idea that was devised by the CEO of Spain Internship SC. It aims at helping students to find jobs or internships easily and provides a platform so that various companies can hire employees. Europe-internship.com has chosen WordPress as its platform and has installed several WordPress plugins that update periodically. Currently, the site is using version 3.8+.

In many European countries, Google is the leading search engine; over half of young people were using Google in 2008 (See Table 2). The table below shows the European market share for search engines in March 2008. The target search engine for Europe-internship.com is Google.

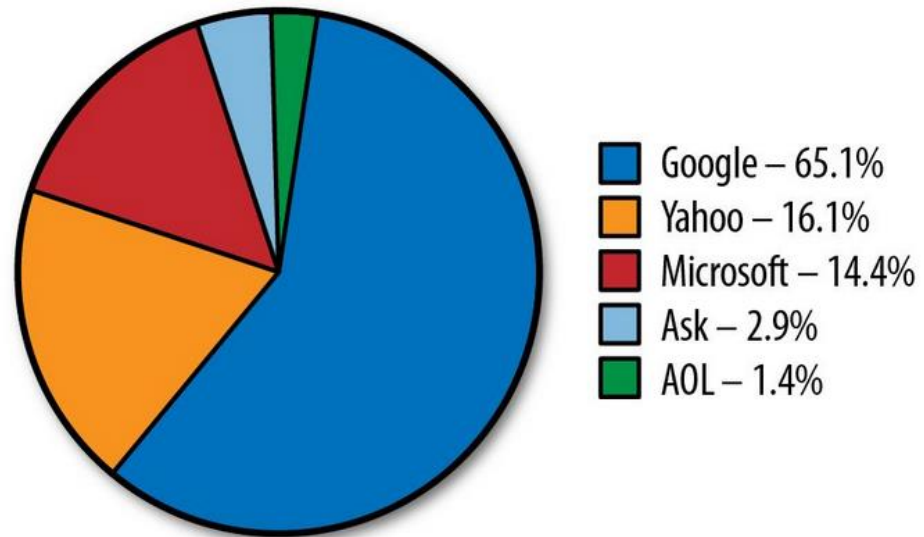


Table 2: Top 10 European Search Engine Market Share (comStore, 2008)

In 2013, WordPress was selected as Top 1 CMS platform from 100,000 sites (See Figure 20). With nearly 60 million installations, WordPress is simple and easy to use. Indeed, WordPress enables users to get the site up and running quickly and consequently allows businesses to focus on SEO efforts. With WordPress, organizations can install and manage the website by themselves or hire an IT developer to install a theme, upload a company logo, create pages, and do plenty of work with On-Page SEO and Off-Page SEO.

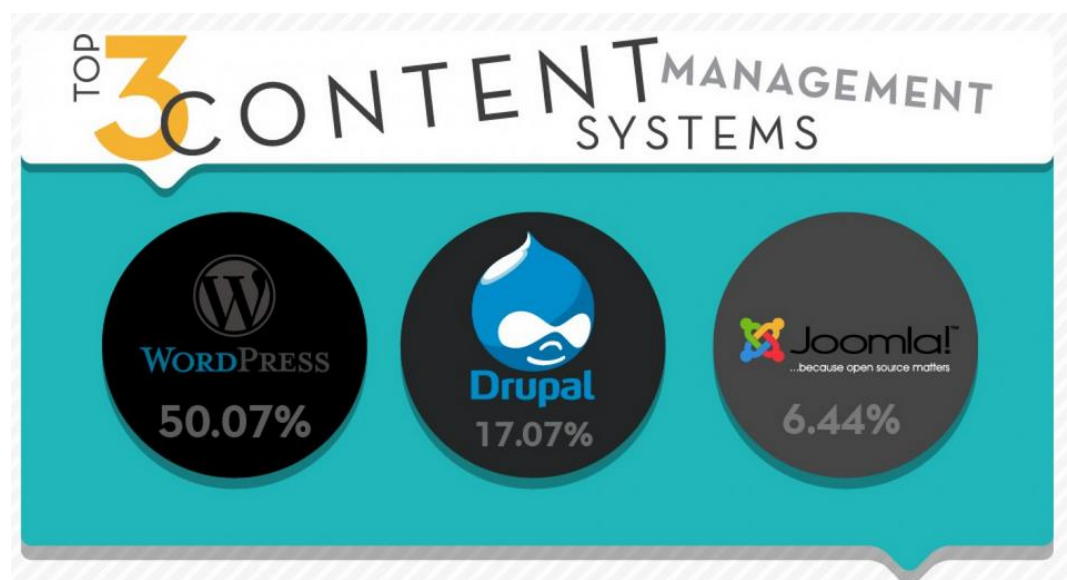


Figure 19: Top 3 Content Management Systems (Quinn, 2013)

Based on the interview results and literature review, the researcher checks Europe-internship.com from the On-Page SEO and Off-Page SEO.

4.2 On-Page SEO Check

4.2.1 Website Design

Europe-internship.com uses two columns for the layout (See Figure 21). This structure helps search engine spiders find the leftmost content first. Placing the sidebar in the right hand side is for search engine spiders to quickly find your content. In addition, a two-column layout allows more space for Europe-internship.com's main content, and the sidebar could display images and ads.

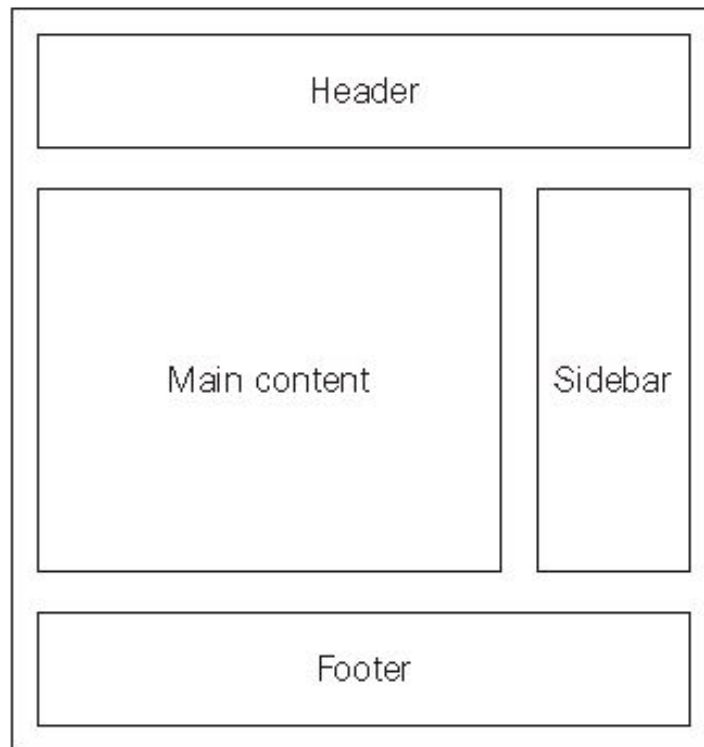


Figure 19: Europe-internship.com Layout

In addition, Europe-internship.com adapts a child theme to improve their website usability and accessibility. They change their website header and footer to a bright color, and leave more spaces for the link building. Since Google favors to see header tags, the website designer used the H3 tag in the footer. Nevertheless, in WordPress the title always uses the H1 tag.

In Europe-internship.com, they also install several WordPress plugins for the On-Page and Off-Page SEO.

4.2.2 URL Friendly

Europe-internship.com's administrator changes the permalink setting in the Settings panel. The default WordPress setting of permalinks was changed from `www.europe-internship.com/?p=123` to `www.europe-internship.com/sample-post/` (See Figure 22). In this way, the URL can include category and file name of the page or post.

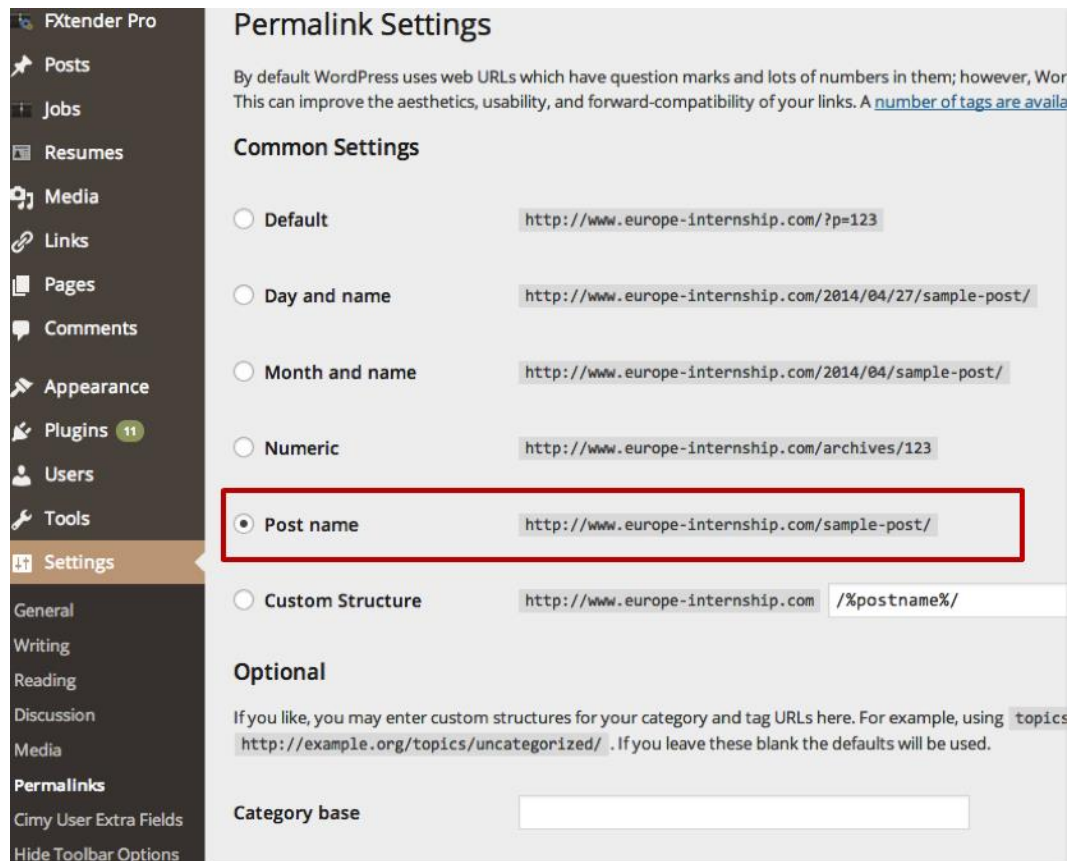


Figure 20: Europe-internship.com Permalink Setting

In addition, the administrator in Europe-internship.com uses H2 tags as subtitle in the pages. After the administrator writes the page title, the permalink automatically populate below it. The permalink is exactly the same as the page title and it will automatically display with hyphens (See Figure 23).



Figure 21: Europe-internship.com Job Permalink

4.2.3 Meta Title, Keyword and Description

For the Europe-internship.com website, the administrator installs WordPress SEO by Yoast to update and analyze On-Page SEO data. WordPress SEO by Yoast inserts all the Meta title, keywords and descriptions in every page. There is no need for users to write HTML code and insert code into every page. A snippet preview is also used to help the people who manage the website see how it looks like in Google. The administrator in Europe-internship.com also uses it to test focus keywords in heading, page title, page URL, content, and Meta description. The administrator could easily optimize the website in different areas and would not miss any points. Since Google weighs title tags, keywords, and the Meta description as factors in its scoring, Europe-internship.com's administrator focused on filling in relevant keywords, adding an SEO title and Meta descriptions. Every time when they upload a new page, they must fill these three elements to keep their SEO scores. According to the words of content, the administrator tries to cover the keywords to title tags, headings, and content. (See Figure 24)

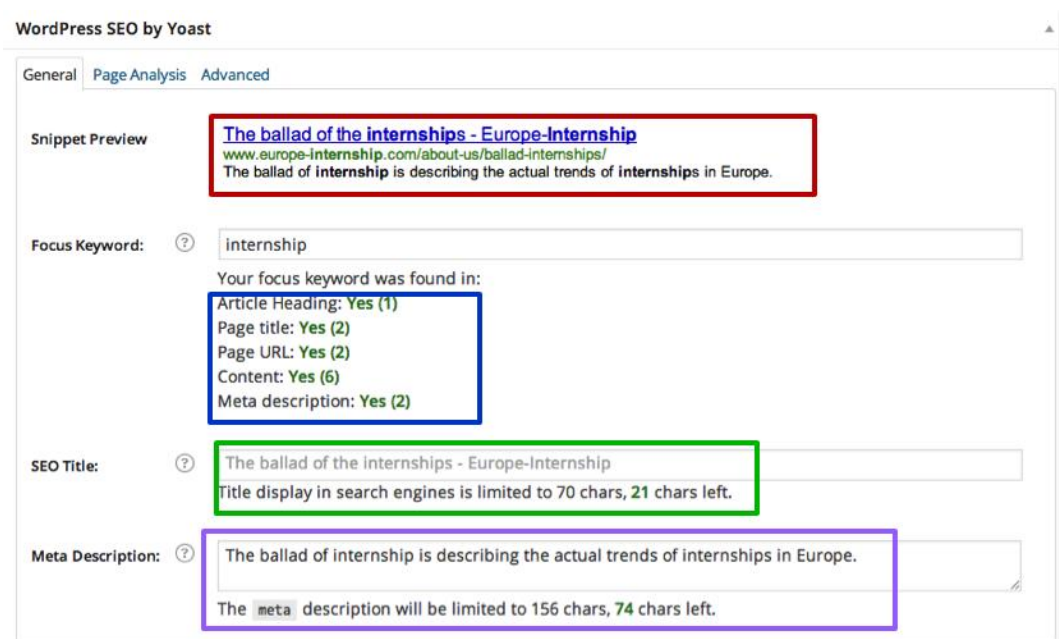


Figure 22: WordPress SEO by Yoast Plugin Interface

4.2.4 Keyword Research

Europe-internship.com searches for the right keywords always start with brainstorming. They also assume that they are the people who are looking for internships and think about what they would type. And they use an Excel spreadsheet to write down primary keywords and secondary keywords, hunting for both a site-wide search and a focused search. They apply a direct approach and a specific approach. For example, the administrator is going to publish an unpaid CRM and content management internship in Spain. For the direct approach, the administrator might simply start with 'unpaid internship', 'internship in Spain'. However, going beyond the direct approach, the administrator will explore the keywords with 'CRM and content management internship', or 'CRM and content management in Spain'. That means companies can use long tail keywords to make an entry in SEO ranking.

Moreover, the administrator uses Google AdWords Keyword Tool to search the volume of search and competition for keywords. The Google Keyword Tool is a fast and effective tool, providing a huge quantity of insight into how rankable any given keyword is going to be. Based on the keywords from brainstorming, Europe-internship.com chooses some keywords and started with primary keywords.

The administrator focuses on the data of 'Competition' and 'Global Monthly Searches' (See Figure 25), finding out low and medium competition keywords that have a relatively high search volume. Their idea is to find a keyword that has low competition with over 10,000 global monthly searches, or even more.

After that, the administrator chooses three or four similar keywords from the Google Keyword Tool search results. Next, the administrator uses these keywords to conduct extra research in the WordPress SEO plugin by Yoast.

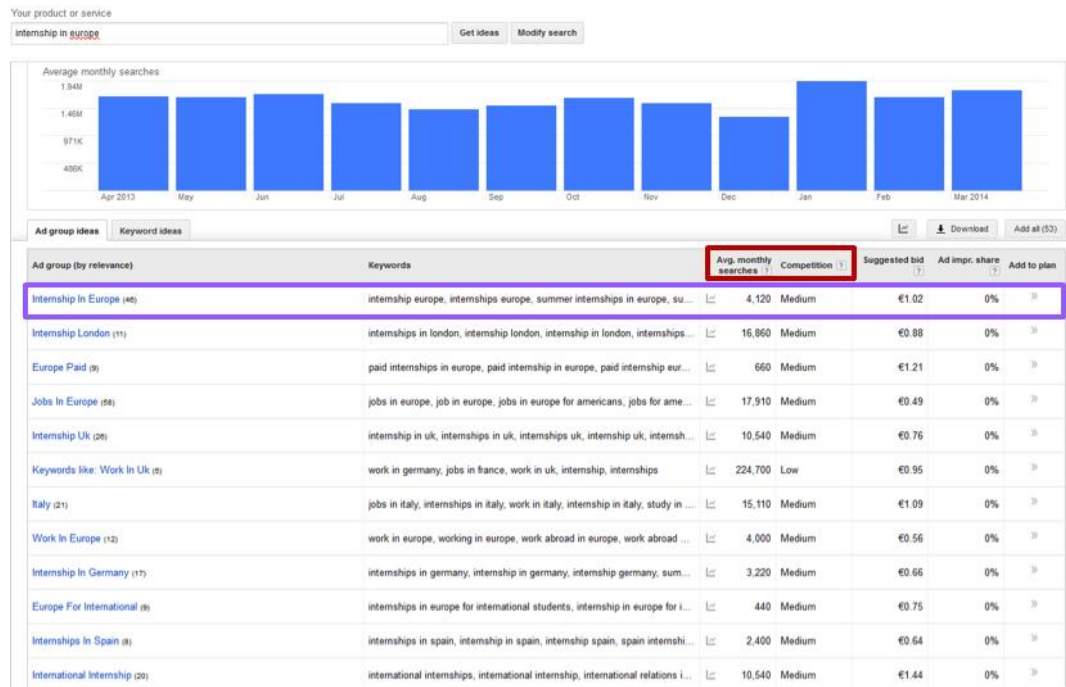


Figure 23: Google Keyword Tool Search Results Page

4.2.5 Inbound Links

Since Europe-internship.com is a platform through which students can find jobs/internships and companies can hire employees, the website has plenty of inbound links including articles, job pages, information pages, and so forth. Most notably, on the site's footer are many inbound links (See Figure 26). Internships in different countries are listed as links, English and Spanish legal terms are also inbound links in the footer. 'Contact us' is another inbound link displayed in the footer. (See Figure 26)



Figure 24: Europe-internship.com Footer Inbound Links

In addition, in the case company's website, they also adapts breadcrumb in their job pages and subpages. Breadcrumb helps visitor to go back to the previous page or level easily. (See Figure 27)



Figure 25: Breadcrumb in Europe-internship.com

4.2.6 robots.txt

Europe-internship.com uses robots.txt in their website to inform the search engine robot not to crawl those pages, content, and images in their website. 'Disallow' is used to prevent search engine robots from accessing the pages that a company does not want it to access. 'Noindex' is used to block the search engines robot from indexing a web page. 'User-agent' stands for special search engines. The asterisk wildcard character (*) in robots.txt file means all. (See Figure 28)

```

← → ↻ 🏠 📄 www.europe-internship.com/robots.txt

User-agent: *
Disallow: /cgi-bin/
Disallow: /wp-admin
Disallow: /wp-includes
Disallow: /wp-content/plugins
Disallow: /wp-content/cache
Disallow: /wp-content/themes

Disallow: /author

Disallow: /feed
Disallow: /*/feed

User-agent: Googlebot-Image
Disallow: /

User-agent: *
Disallow: /*.php$
Disallow: /*.js$
Disallow: /*.inc$
Disallow: /*.css$
Disallow: /*.gz$
Disallow: /*.wmv$
Disallow: /*.cgi$
Disallow: /*.xhtml$
Disallow: /*.xlsx $
Disallow: /*.doc$
Disallow: /*.pdf$
Disallow: /*.zip$

```

Figure 26: Europe-internship.com robots.txt

4.3 Off-Page SEO Check

4.3.1 Outbound Links

In addition to inbound links, Europe-internship.com features numerous outbound links as well. In the Figure 29, we can see how the company links its social media tools in the home page footer.



Figure 27: Europe-internship.com Outbound Links

Moreover, Europe-internship.com cooperates with some other companies and places its ads as outbound links in the sidebar. Europe-internship.com has additionally installed a sponsor's slideshow widget through which sponsors can display their ads as outbound links in the sidebar. (See Figure 30)


The screenshot shows the Europe-internship.com website. The top navigation bar includes links for 'Blog', 'Join us!', 'Tips & info', 'About us', 'Mediation Service', 'Submit a Job', and 'Login/Register'. Below the navigation bar is a search bar with 'All Jobs' and 'Location' filters, and a 'Radius: 50 km' dropdown. The main content area features a 'Featured Jobs' section with a list of job postings. The sidebar on the right contains a 'Submit a Job' button, a note about job review times, and a 'Browse by...' menu with options for 'Job Type', 'Job Salary', 'Job Category', and 'Date posted'. A red box highlights an advertisement for Erasmus, which includes the text 'Find accommodation, events and information about the cities!' and the website 'www.erasmus.com'. The advertisement also features the European Union flag and the 'Education and Culture DG Lifelong Learning Programme' logo.

Job Title	Location	Date
Paid internship for logistic trainees in Almere, The Netherlands	Almere, Flevoland, The Netherlands	12 Mar 2014
Internships for international students and graduates, Düsseldorf, Germany	Düsseldorf, North Rhine-Westphalia, Germany	10 Mar 2014
No fees! Paid marketing, CRM and content management internships in Barcelona, Spain	Barcelona, Cataluña, Spain	4 Mar 2014
Paid customer service internship for Polish speakers in Hamburg, Germany	Hamburg, Germany	20 Feb 2014
Online Marketing and Ecommerce Internship in England	Saint Albans, England, United Kingdom	28 Jan 2014
Paid 500€/month English Teaching Internships in Spain and UK	Madrid, Community of	21 Oct 2013

Figure 29: Europe-internship.com Outbound Links in Sidebar

4.3.2 Social Networking

The main social media tool used in Europe-internship.com is Facebook. They install WordPress Facebook Like plugin. This plugin helps Europe-internship.com to share new jobs to their Facebook fans. Visitors can share and like the job pages in the Europe-internship.com website and also like Europe-internship.com's Facebook page in the sidebar. (See Figure 31)



Job Description

Our collaborator is a language school based in diverse cities in Spain (Madrid, Barcelona and Valencia) and abroad (London). The school offers language courses as English, French, German, Italian, Spanish, Catalá, Portuguese, Russian, Arabic...and many more. It has an unique teaching method, defined as one to one, which allows students to develop their language skills by practical trainings. Students can decide when and where they want to have the lessons, making learning easiest than ever!


Requirements

Languages: Native English speakers
Studies: Undergraduate, able to provide training agreement from University.
Remuneration: 500 €/month + Health insurance + Spanish course offered by the company (4 hours/week)
Location: Madrid Barcelona Valencia
Availability: Madrid, Barcelona, Sevilla, Valencia, London and Milan available all year round

This internship is available all year long.

This program does not have any fees related.


To apply, click the "apply online" button below.

 Like Share 17 people like this. Be the first of your friends.

Job Salary	>
Job Category	>
Date posted	>


Facebook Friends

Find us on Facebook



Europe-internship.com
Like You like this.

You and 11,119 others like Europe-internship.com.



Facebook social plugin

Sponsored Ads




Figure 28: Europe-internship.com Facebook Sharing and Like

5 DATA ANALYSIS

The purpose of this study is to find the key factors' which can impact a CMS website's SEO, and there are hundreds of pages in the Europe-internship.com. Checking the website pages one by one is not a wise decision; therefore, the researcher first uses coding analysis method to categorize the data from the interview, and then uses an analysis tool to analyze the Europe-internship.com website. In the end, the researcher categorizes all the data together and analyzes all the data via On-Page SEO and Off-Page SEO. The researcher also reveals the data details and implications.

5.1 On-Page Optimization Techniques

- WordPress Design

In every page, Europe-internship.com has included an H1 tag, and the H1 tag is different to their page title. The H1 title is the correct length of fewer than eight words. In addition, every page also adopted an H2 tag and an H3 tag. These heading tags help a search engine to crawl website content and indicate the substance.

However, the image in the Europe-internship.com was missing an ALT tag, which may decline the website's search engine ranking.

- URL Friendly

URLs in the Europe-internship.com are the correct length. All the URLs used hyphens and used it to split the keywords. In addition, Europe-internship.com divided different jobs into different categories. Therefore, all the URLs are well structured, logical and clean.

- Meta Title, Keyword, Description

All the pages in Europe-internship.com have title tags; however, 42 pages have long titles. Europe-internship.com should keep the title 70 (or fewer) characters long. Search engines display titles as part of search results, but titles longer than 70 characters may be truncated with ellipses (...).

Europe-internship.com uses keywords in every page, and the number of keywords is commonly two to five. The figure below is a list of keywords that rank first in different countries' Google search engines. It is only part of the keywords list; however, from the below figure, it shows that 'free internship in europe' ranks No.1 in Google's search engines in Czech Republic, Austria, Finland, and so forth. Some other keywords also rank No.1 in different countries' Google search engines. (See Figure 32)

Keyword	SE	Location	Rank	Previous	Top	Best Page	Global Count	Local Count	Last Checked	Ranking History
europa internships	SE	SE	1	-	1	www.europe-internship.com/	590	10	3d ago	View/Compare
free internship in europe	SE	CZ	1	-	1	www.europe-internship.com/	10	0	3d ago	View/Compare
europa internships	SE	SE	1	-	1	www.europe-internship.com/	590	10	3d ago	View/Compare
free internship in europe	SE	CZ	1	-	1	www.europe-internship.com/	10	0	3d ago	View/Compare
europa internships	SE	SE	1	-	1	www.europe-internship.com/	590	10	3d ago	View/Compare
free internship in europe	SE	AT	1	-	1	www.europe-internship.com/	10	0	3d ago	View/Compare
europa internships	SE	SE	1	-	1	www.europe-internship.com/	590	10	3d ago	View/Compare
free internship in europe	SE	AT	1	-	1	www.europe-internship.com/	10	0	3d ago	View/Compare
europa internships	SE	SE	1	-	1	www.europe-internship.com/	590	10	3d ago	View/Compare
free internship in europe	SE	AT	1	-	1	www.europe-internship.com/	10	0	3d ago	View/Compare
europa internships	SE	SE	1	-	1	www.europe-internship.com/	590	10	3d ago	View/Compare
free internship in europe	SE	AT	1	-	1	www.europe-internship.com/	10	0	3d ago	View/Compare

Figure 29: No.1 Keywords Ranking by Countries

The researcher typed the keyword phrase 'germany internship' into Google. And the figure below indicates that Europe-internship.com ranks as No.2 in the organic search results just after LinkedIn. (See Figure 33) This indicates that Europe-internship.com works well with keywords research.

Google

Web Images Maps Videos News More Search tools

About 17,800,000 results (0.26 seconds)

Cookies help us deliver our services. By using our services, you agree to our use of cookies. [Learn more](#) [Got it](#)

Internships in Germany - practigo.com
 Ad www.practigo.com/
 We offer internships, language course, accommodation in Germany!

Internships in Germany - internships-4u.com
 Ad www.internships-4u.com/
 We offer internships, language course, accommodation in Germany!

Internship Jobs in Germany | LinkedIn
<https://www.linkedin.com/job/q-internship-l-germany-jobs>
 Apply to 197 Internship jobs in Germany on LinkedIn. Sign up today, leverage your professional network, and get hired. New Internship jobs added daily.

Internship in Germany, the motor of European economy
www.europe-internship.com/find-intern-placement-germany/
 Find internships, student placements or interns in Germany | Europe Internship is a free online platform to recruit interns and find internships in Europe.

Figure 30: Google Search Results Page for Keyphrase 'germany internship'

Meta descriptions were also adopted in Europe-internship.com; however, of the 987 unique HTML pages, 942 pages share Meta descriptions with other pages that have different content. There are 45 pages that have duplicate Meta descriptions for multiple URLs, which can reduce traffic from search engines.

- Inbound Links

From the graph above (See Table 3), we can see that there are 2,260 internal links, and 11,624 backlinks in Europe-internship.com homepage. It is strong evidence that Europe-internship.com did an excellent work in inbound links. However, Europe-internship.com put too many links on a given page, which may negatively impact how search engines assess the quality of the page, and can make the website harder to navigate. Therefore, Europe-internship.com can review the pages to make sure they do not contain link spam.

The administrator should also update broken links, since eight broken links were found on the Europe-internship.com. In addition, links on Europe-internship.com were found in JavaScript or Flash. Search spiders have trouble with crawl and index links in Flash and JavaScript. Europe-internship.com can use a plugin or a widget instead of manually putting links in JavaScript or Flash to improve the website search engine ranking.

Page Rank	7
Internal Links	2,260
External Links	21
Backlinks Count	11,624
Followed Links	100%

Table 3: Traffic Travis On-Page SEO Analysis in Homepage

- robots.txt

The administrator of Europe-internship.com blocks all search engines robots from file cgi-bin, wp-admin, wp-includes, wp-content/plugins, wp-content/cache, wp-content/themes. They also block all the authors from feed. In addition, images from Google were also blocked. In the end, the administrator block all URLs that end with .php, .js, .inc, .css, .gz, .wmv, .cgi, .xhtml, .xlsx, .doc, .pdf, .zip. (See Figure 34)

```

User-agent: *
Disallow: /cgi-bin/
Disallow: /wp-admin
Disallow: /wp-includes
Disallow: /wp-content/plugins
Disallow: /wp-content/cache
Disallow: /wp-content/themes

Disallow: /author

Disallow: /feed
Disallow: /*/feed

User-agent: Googlebot-Image
Disallow: /

User-agent: *
Disallow: /*.php$
Disallow: /*.js$
Disallow: /*.inc$
Disallow: /*.css$
Disallow: /*.gz$
Disallow: /*.wmv$
Disallow: /*.cgi$
Disallow: /*.xhtml$
Disallow: /*.xlsx $
Disallow: /*.doc$
Disallow: /*.pdf$
Disallow: /*.zip$

```

Figure 31: Europe-internship.com robots.txt Analysis

5.2 Off-Page Optimization Techniques

- Outbound Links

Table 3 also shows that Europe-internship.com has 21 external links on their homepage. And Alexa.com analysis result reveals that in the last 12 weeks, in total Europe-internship.com has 2,615 external links. This points out that Europe-internship.com performs excellent in outbound linking strategy. Here are some of the top outbound links:

Top Link Referrals by Last 28 days

	Website	Referral Count	Percent of Link Referrals
1.	mimoskolu.cz	9	9,574%
2.	eurodesk.cz	7	7,447%
3.	zinauviska.lt	6	6,383%
4.	pg.edu.pl	5	5,319%
5.	tlu.ee	4	4,255%
6.	osvita.ua	4	4,255%
7.	businessculture.org	4	4,255%
8.	bosz.uj.edu.pl	4	4,255%
9.	relint.uva.es	3	3,191%
10.	r.search.yahoo.com	3	3,191%

Figure 32: Top Outbound Links

- Social Networking

Social Signals	
Facebook Likes	143
Facebook Shares	300
Facebook Comments	20
Twitter Backlinks	90
Google +	13
<u>Pinterest Pins</u>	0
<u>StumbleUpon</u>	0
LinkedIn	4
Delicious	11

Table 4: Europe-internship.com Home Page Social Metrics

From table 4, it is easy to see that Facebook is the preferred social media platform, and Europe-internship.com homepage got 143 Facebook likes and 301 Facebook shares. Other social media networks received less attention. In addition, other pages also have similar numbers with the homepage.

Finally, according to Alexa outcome, below are the most important points that Europe-internship.com should take into account in order to improve their SEO performance. First, make sure that the important pages on the website have titles that are 70(or fewer) characters long. Second, review the pages to make sure they do not contain link spam. Third, give each page of the website a Meta description

reflecting the content of that page. Fourth, fix broken links on the site. Fifth, correct errors in the configuration of the 'Page Not Found' error page. Sixth, give each page of the website a title that reflects the content of that page.

6 CONCLUSIONS

The literature review of this thesis shows that there are two main factors that can help to increase the SEO ranking. The first one is On-Page SEO, and the second one is Off-Page SEO. The On-Page SEO includes website design, URL friendly, Meta tags, a title, a description, keyword research, and inbound links.

Meanwhile, the Off-Page SEO involves outbound links and social presence.

However, the case study revealed that, in addition to the factors found in the literature review, Europe-internship.com also used other SEO techniques such as robots.txt and tools to increase its Google ranking.

In addition, from the data analysis, the researcher found some important suggestions, which can be used in future projects. For example, putting too many links on a given page may negatively impact how search engines assess the quality of the page and can make the website harder to navigate.

It is not difficult to increase the CMS website's SEO ranking on Google and other search engines. However, it takes time to learn, and it takes lots of effort to implement these techniques. Companies can concentrate on On-Page optimization and Off-Page optimization. To be more specific, link building and keywords are the main factors for a company to improve their SEO ranking. Top-ranked websites always have hundreds or thousands of links, do their keywords research and analysis carefully, and it takes more than one month to implement and to rank high in Google.

Nevertheless, it is also a plus to use effective SEO plugins on CMS websites and useful analyzing tools and resources. Analyzing tools can help companies audit their SEO fast and effective. Then Companies can modify their CMS website according to the analysis report. Resources can help companies know the latest news, maintaining and upgrading their WordPress plugins and solving other problems.

7 DISCUSSION

7.1 Scope and Limitations

The aim of this study is to find out the key elements to increase CMS websites' search engine ranking. It includes both On-Page and Off-Page optimization techniques.

There are two limitations this study deals with. The first one is the case study platform. The platform of case company is WordPress, which is one of the most popular content management systems. With the development of content management systems, there are different kinds of platform for users to build websites on, such as Drupal, Joomla, vBulletin, and the like. Due to the time limitation, it is impossible for researchers to perform their research on all kinds of content management systems. WordPress is only a representative platform of content management systems. Another limitation is that Google is the target search engine for the case company. Whereas, in some markets, Google is not the dominant search engine. For example, Baidu is the main search engine in China. Moreover, other search engines may have different rules that companies should notice.

7.2 Reliability and Validity

Joppe (2000) defines reliability as:

“...The extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable”

In this study, reliability is measured via the case company based on the literature review. First, the researcher chooses a successful company whose website pagerank is 7/10. Second, the researcher interviews the case company website's administrator. From the face-to-face interview, the researcher gets relevant answer according to the open-end questions. Third, the researcher observes the case company's website through participant observation. After that, the researcher

analyzes interview results and uses analysis tools to analyze Europe-internship.com SEO. Finally, the researcher can compare the factors between the literature review and the case company and get the conclusion. All the sources are chosen rigorously and the analysis tool is updated weekly; therefore, the final result is reliable.

In addition, Joppe (2000) defines validity as:

“Validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are. In other words, does the research instrument allow you to hit “the bull’s eye” of your research object? Researchers generally determine validity by asking a series of questions, and will often look for the answers in the research of others”

In this study, validity is measured by comparing the result with others and by checking that the results match with the researcher’s assumption. A similar result is found that Adams (2014) reveals as follows:

“With billions of webpages vying for search engine traffic, competing and clawing their way to the top of SERPs, picking and selecting the right keyword can either propel you high up on the ranking”

Moreover, Flischner (2013) indicates that

“Many sites significantly improve their rankings based on a strong internal linking strategy.”

These research results strongly support the validity of this study. In addition, these research outcomes are similar with the researcher’s assumption. Therefore, this study is valid.

7.3 Suggestions for Further Research

As a suggestion, the researcher can also include Joomla and Drupal in their research study, since over 18% of sites are using Drupal and approximately 7% of sites are using Joomla. In addition, researcher can involve other search engines in their research. For example, if the target market is the United States, then the researcher can involve in both Google and Yahoo in the research.

For the future project, companies could pay extra attention to title tags characters, making sure the title reflects the content of the page. Not putting too many links in the website, giving each page a Meta description, fixing broken links on the site, correcting errors in the configuration of 'Page Not Found' error page are all good practices to improve the ranking.

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APPENDICES

Example unstructured questions:

- Which platform do you use in Europe-internship.com? And which version are you using now?
- Which search engine is your target?
- Do you know any SEO techniques?
- Which techniques do you apply to Europe-internship.com?
- Do you install any plugins related to SEO? If yes, please tell more details.

On-Page SEO checklist (Adams, 2014):

- CSS separated from content
- Keyword in title tag
- Meta tag description uses keyword
- Keyword in H1 tag
- Keyword in H2 tag
- Keyword in H3 tag
- Keyword in bold tag
- Keyword in italics tag
- Keyword in underlined tag
- Image alt tag utilizing keyword
- One image on page is named with keyword
- At least 500 words of content
- Usage of breadcrumbs

Alexa SEO Audit Checklist:

- Duplicate Title Tags
- Missing Title Tags
- Long Title Tags
- Multiple Title Tags
- Hostname
- Reachability

- Redirects
- Anchor Text
- Broken Links
- Dead End Pages
- Page Not Found
- Long URLs
- Duplicate Content
- Duplicate Meta Descriptions
- Too Many Links
- Server Errors
- Robots.txt
- Session IDs
- Search Engine Marketing (SEM)
- On-Site Links
- Low Word Count