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# SEARCH ENGINE OPTIMIZATION AND ITS IMPLICATIONS IN INTERNET MARKETING

Plagiarism Avenger

Word Press Plug-in

BACHELOR'S THESIS | ABSTRACT

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# **SEARCH ENGINE OPTIMIZATION AND ITS IMPLICATIONS IN INTERNET MARKETING**

Internet audience is on a hike and marketers are concentrated on reaching them through Internet marketing. Search engines had never been used as intensively as it is today. Being rated high in Google or other search engine ranking reflects the potentiality of being reached to millions of customers, hence enhancing the business. Google alone has 694,000 searches conducted every second and the process which help our website rank higher in the organic (natural) search result is known as search engine optimization (HUBSPOT, 2012)

Research was conducted in a new website developed by enterprise engine, Turku. The rules (techniques) of search engine optimization described in different sources by gurus were taken into consideration to find its effectiveness. Search engine optimization (SEO) for the website was carried out and the visibility in Google search was observed and analyzed that provided significant results.

Data analysis included the statistical records taken from Google Analytics and a survey was conducted in the topic for which questionnaire were sent to people. Further data needed were collected from previous studies and analyzed how our research and the previous studies matched.

This research was beneficial to enterprise engine and would be to the entire Internet companies wanting to market their product online using Search engine optimization and rank themselves in the natural search results and gain potential customers.

**Key words:** SEO, Online marketing, Internet Marketing, Internet, Marketing

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## **LIST OF ABBREVIATIONS (OR) SYMBOLS**

ICT	Information communication and technology
SEO	Search Engine Optimization
SERP	Search Engine Result Page
HTML	Hypertext Mark-up Language
XML	Extensible Mark-up Language
SEM	Search Engine Marketing
PPC	Pay per Click

# **1. INTRODUCTION**

## **1.1 EMERGENCE AND DEVELOPMENT OF INFORMATION COMMUNICATION AND TECHNOLOGY (ICT)**

Emergence of Internet has revolutionized the world of communication and computing. The development of telegraph was the initiation of this revolution and the way world would communicate had gone a step further. During the year 1840 (ATLANTIC-CABLE.COM, 2010), underground cables for the purpose of development of this sector under the Thames River, London, created pavement for leaping in this field. In the years 1955 and 1956 transatlantic cable system was installed which created a solid framework in communicating between the continents (ATLANTIC-CABLE.COM, 2010). People have reached the moon, on earth they are using communication mediums to interact among the people in different parts of the world .All the fundamental elements around us today use some form of ICT.

## **1.2 INTERNET**

The use of Internet has been booming since its creation. There are millions and millions of computers linked throughout the world. The basic aspect of the internet still remains to share and communicate the information from one person to another and one place to other in the form of email, online chat, VoIP, ecommerce, online gaming, World Wide Web etc. The access to Internet has wide spread and has penetrated in almost all the societies in the recent years irrespective of the geographical region or country.

Smartphones today are equipped with the function of using the Internet; this has even made Internet reach wide and far.

Figure 1 shows the worldwide penetration of the Internet. None of the region in the world is left in solitude in terms of the use of Internet. Asia, Europe, America have the highest concentration of Internet users.

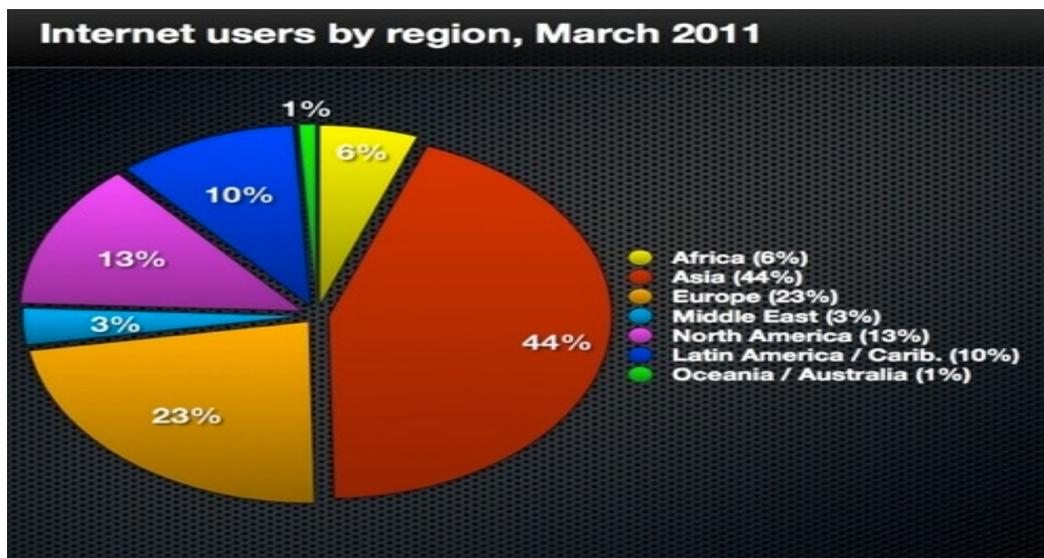


Fig 1 Internet users by region. ( Internet Users Statistics, 2012)

As mentioned by Friedman (2005) the world has turned into a labelled playing field due to the ten flatteners. Some of which are uploading, outsourcing, offshoring. According to him the world is experiencing globalization 3.0 in which the individuals are globalized that means they can be in touch of anyone in any part of the world to perform their duties and tasks. This has been possible due to the availability of World Wide Web and the Internet.

### 1.3 E- COMMERCE

E-commerce is the exchange transactions, which take place over the Internet primarily using digital technology. These exchange transactions include buying, selling, or trading of goods, services and information (SCHNIEDER and Cao, 2002). The success of e-commerce these days is primarily because of the fact that the internet penetration in the world is increasing and the operating cost for this form of business is much lower than traditional form of selling which helps decrease product cost. As per data (EMARKETER.COM, 2013) business to consumer (B2C) ecommerce sales topped \$1 trillion for first time in 2012. There are many websites solely depending on the e-commerce for the sales of their products such as ebay.com, amazon.com where as there are companies such as Apple, Microsoft, Dell and others who operate their e-commerce website to maximize their sales.



Fig 2 E-commerce penetration (Morgan Stanley global e-commerce model, 2013)

Figure 2 explains the percentage of people engaged in e-commerce activities in different parts of the world with the estimates of the years to follow. The figure provides a motivating trend in the E-commerce penetration in most of the economies of the world.

## **2. RESEARCH**

Research is simply the process of asking questions and answering them by survey or experiment in an organized way. It is also a procedure of systematic collection, analysis and interpretation of data to answer a certain question or solve a problem. (NYANJUI, PJ, 2013)

The research in the topic “Search Engine Optimization and Its Implications in Internet Marketing” tries to analyse whether Search engine optimization for a particular website can be helpful to rank it higher in the search engine rankings and enhance the marketing goals and maximise sales.

### **2.1 RESEARCH BACKGROUND AND OBJECTIVES**

Enterprise Engine is a EU-based management consultancy, business, IT and academic concept selling firm, offering individuals and companies an opportunity to explore, expand and exploit their potential.

This is a parent company under whose name is launched software called Plagiarism Avenger. Plagiarism Avenger is a content protection product.

Since the product was entirely new in the market, there were really huge hurdles to overcome before the selling process could begin. It was an uphill task to find the customers or the buyers for our product.

Since we were working on the beta version of the website [plagiarismavenger.com/beta](http://plagiarismavenger.com/beta), The CEO suggested to us that before the product actually gets in the market, people should know what is coming. Therefore we decided that search engine optimization for the website can be done.

Our main goal behind performing SEO was actually to find out whether the procedure actually works and the newly formed websites can be listed in the search engines and can drive traffic into the website to improve the business.

## **2.2 RESEARCH QUESTIONS**

There were some questions that were raised before initiating this research work. This thesis will try to find out the answer to those questions to get into a solid conclusion. At the end of this research the answers to these questions will be sought for:

- Is search engine optimization an effective tool for Internet marketing?
- Is search engine optimization effective to get listed /ranked in Google search?
- Is it relevant for online/small and medium enterprises to perform search engine optimization?

### 3. LITERATURE REVIEW

#### 3.1 SEARCH ENGINE

Finding a relevant material in the web could be a hectic task in the absence of the search engines. Search engines are the websites, which help users find the appropriate information they are looking for by narrowing the results from the list of numerous information present in the web. After that the user decides whether to follow the link presented in the first page or to continue the search in the upcoming pages. (LEVENE, Mark, 2010)

There are many search engines in the market, but among all Google (www.google.com) tops the war with the other two main competitors yahoo (www.yahoo.com) and Microsoft`s Bing (www.bing.com).The market share for the top search engines are provided in the chart below.

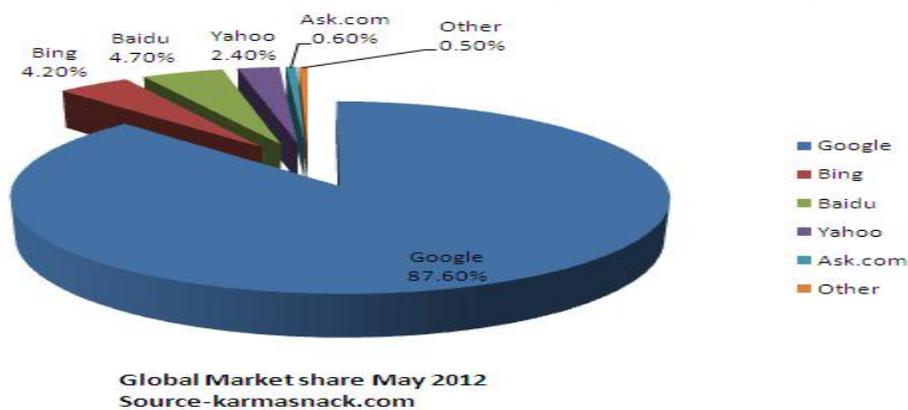


Fig 3 Global market share of search engine (Search Engine Market Share, 2012)

As someone tries to search something using the search engine, even before completing the search phrase, the search engines send out bots or spiders that survey the web pages found in the Internet and build their database. The bots then retrieve the information in the Web Pages according to the repeated keywords contained in the search phrase and index them in the search page (VIEIRA, Karen F., 2008).

### 3.2 KEYWORDS FOR SEARCH

The process of typing something into the search box and retrieving the awaited results takes a fraction of a second if proper keywords are used. Keywords are very essential for any search to give relevant results. Key words are the words that are typed in the search engines and that match the words in our documents/Webpages. Generally those keywords are favoured by search engines that are used as headlines and that are capitalized (LEVENE, Mark, 2010). They can be the sum of our own webpage. If these words are typed in the search box, the results appear for instance in Google as shown in figure 4 below.

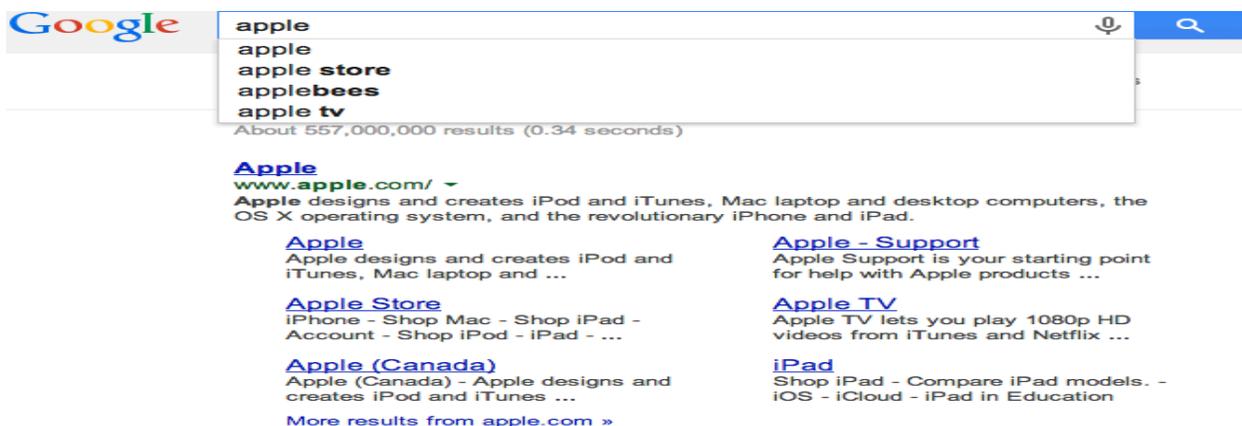


Fig 4 Search results for keyword "Apple"

Long tailed keywords are also very essential when it comes to finding a specific search material in the Internet. Long tailed keywords are the type of keyword phrase that have at least two or as many as five words in the phrase. The keywords in the long tailed keywords are highly specific and generate less traffic for the website, but tend to draw more quality traffic, which leads a customer to make a transaction after finding a correct link in their search (ODOM, Sean, 2011). This is why long tailed keywords are essential. For instance if a person sells shirts, he may want his website to be listed for the keyword “shirt store”, but there could be many other competitor websites and the chances of getting potential customers could be reduced. On the other hand if a person could specify what kind of shirt he sells with a long tailed keyword such as “fashionable full sleeved summer shirt”, the hits he would get for this keyword could be reduced but the customers who specify these search details can end up buying the product as we contain their desired product.

### **3.3 SEARCH ENGINE OPTIMIZATION**

Search engine optimization (SEO) is a broad topic, which includes search engine marketing (SEM). SEM is the phenomenon, which includes all marketing techniques for search and visibility in the Internet. Being visible in the Internet especially in the search engines is extremely important from a business point of view. SEM affects both the organic and paid search results; they appear on different parts of the webpage. Paid results for a particular keyword such as “online games” appear in the topmost part of the webpage whereas the organic or natural search results start appearing after the paid advertisements .The figure below shows the paid and the organic search results in a search engine.

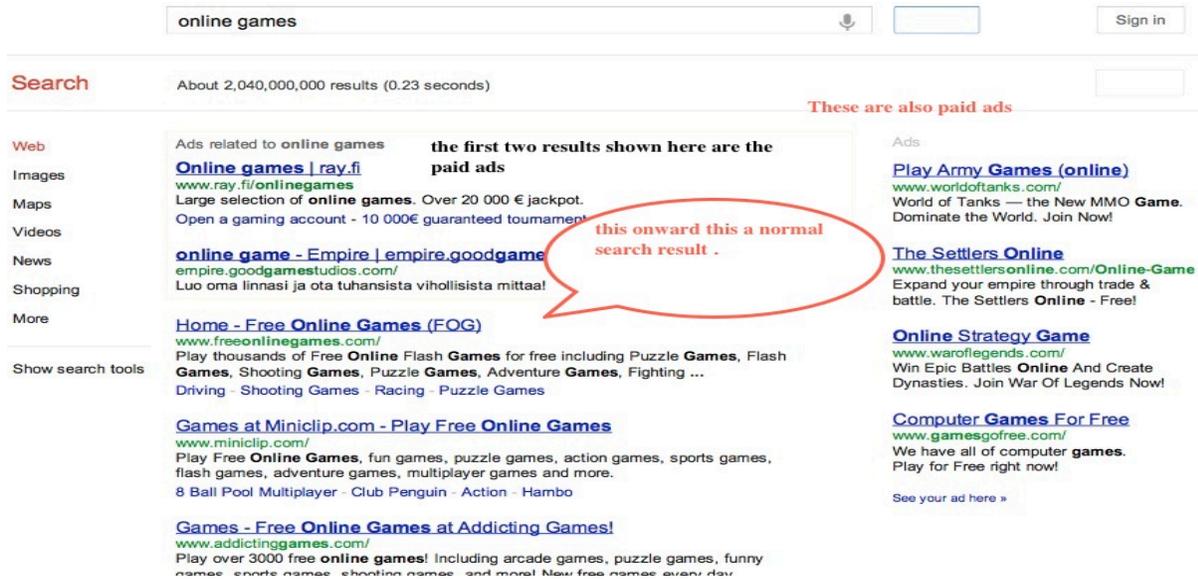


Fig 5 Paid and Organic search results for keyword “online games”

Search engine optimization (SEO) refers to a technique that helps website rank higher in organic or “natural” search results, thus making website more visible to people who are looking for product or service via search engines (HUBSPOT, 2012). Most of the people concentrate on the first page during their search for a result. There are a few people who literally jump to the next page of the search; therefore being visible in the first page and towards the top adds traffic and potential customers to the business. A properly Search Engine Optimized (SEO) website is a critical component of any Internet business. A website optimized for search engines will rank high, which brings it to the first page of a potential customer’s search results (Search Engine Optimization (SEO) – Marketing Services , 2013)

The following figure shows the percentage of people actually visiting only the first result and the first page of a search engine and the rest moving on to the next pages.



Fig 6 Search engine result by page and position (GOODWIN, Danny, 2011)

### 3.4 SEARCH ENGINE MARKETING

According to (Search engine marketing (SEM))Search engine marketing is the process of gaining traffic and visibility from search engines through both paid and unpaid efforts. It encompasses:

SEO: Earning traffic through unpaid or free listings

SEM: Buying traffic through paid search listings

The advertisements, that appear as a result of search engine marketing, is known as the “sponsored links” Often they appear in the search pages more prominently and in different colour than the natural or organic search results. Generally the cost of advertisement is the per click on the advertisement .The best known search engine advertising is the Google ad words –advertising

The screenshot shows a search engine interface with the search term "online games" in the top bar. Below the search bar, there are navigation options: "Verkkohaku", "Kuvahaku", "Kartat", "Sovellukset", "Lisää", and "Hakutyökalut". A message indicates "Noin 2 080 000 000 tulosta (0,19 sekuntia)". A cookie consent banner is present, with "OK" and "Lisätietoja" buttons. Below the banner, a section titled "Mainokset liittyvät hakuun online games" contains several sponsored links:

- Empire: Free Online Game - empire.goodgamestudios.com**  
[empire.goodgamestudios.com/](http://empire.goodgamestudios.com/) - Luo oma linnasi ja ota tuhansista vihollisista mittaa!
- Play Ghost Recon Online - ghost-recon.ubi.com**  
[ghost-recon.ubi.com/PlayFreeOnline](http://ghost-recon.ubi.com/PlayFreeOnline) - Play Ghost Recon Online free today. Free-2-play tactical TPS, join now!
- Top 10 Free Online Games - Play the Latest MMO & MMORPG's**  
[www.gameprowl.com/free-play](http://www.gameprowl.com/free-play) - No Downloads, 100% Free to Play!
- Games - Free Online Games at FOG.COM**  
[www.freeonlinegames.com/](http://www.freeonlinegames.com/) - Käännä tämä sivu  
 Play thousands of Free Online Flash Games including Puzzle, Shooting, Adventure, Fighting, Sports, War, 3D, Strategy, Racing, Arcade, Classic, Flying, RPG, ...  
 Quad Trials - Super Mechs - New York Taxi License 3d - Shooting Games

Fig 7 Paid or sponsored links appearing for the keywords “online games “

Pay per click (PPC) is the form of advertising that is the most common form of advertising online, in the process a small advertisements are placed in the search engine results as seen in the above figure and the advertiser is charged only when someone actually clicks into the advertisement (LURIE, Ian, 2011)

### 3.5 GOOGLE PAGE RANK

Search engines have developed several ways to rank the pages; most common form of ranking a page is the availability of the search phrase or the keywords that are typed in the search box. For better search results and to make the search engines resistant against automatically generated webpages, link popularity was also started to use. According to this concept; the number of inbound links for a document measures its general importance. Therefore a webpage is considered to be more important if many other webpages link to it (SOBEK, Markus, 2002)

## **3.6 OFF SITE SEO**

Offsite SEO is executed with building relationships with other websites with the creation of attractive contents or reaching out to the people who run the websites. This process is also known as link building (HUBSPOT, 2012).

As we know that Internet is an interlinking network of pages and the websites, interlinking or back linking from different websites to our pages would definitely help in improving the ranks in the search engines. Back linking in the major publications or educational websites could be more powerful than the normal links (HUBSPOT, 2012). There are various forms of back linking. Some of the general ways of back linking are explained in section 3.6.1-3.6.7

### **3.6.1 ARTICLES SUBMISSION**

Article submission or article marketing is a useful process when it comes to back linking websites. There were articles written about plagiarism avenger our upcoming product and posted in one of the most important article submission directory ezinearticles.com, back links were added in the body of the articles. Now taking into account the popularity of this website Google crawlers crawl upon them more frequently and come across the back links which we have added and hence more hits to our website.

### **3.6.2 PRESS RELEASES**

There are press release websites in the Internet similar to the article submission websites but press release sites are different which describes the products and provides news about anything new going on in the market. These sites are rated high and the possibility of Google crawlers crawling upon them is higher. These are yet another

websites ranked high where news articles are written. These websites act as the newspaper in the internet .we had made articles on plagiarism avenger, our product, and back linked the news report with the website [www.plagiarism-avenger.com](http://www.plagiarism-avenger.com) and submitted to different press release sites such as

- [www.1888pressrelease.com](http://www.1888pressrelease.com)
- [www.theopenpress.com](http://www.theopenpress.com)
- [www.ecommwire.com](http://www.ecommwire.com)
- [www.free-press-release.com](http://www.free-press-release.com)

### **3.6.3 FORUM COMMENTING**

There are forums in the Internet for interaction purposes on different subject matter usually where the users discuss. It is allowed as a user to include a signature during the closing of any comments. This can include the name of a person or a signature containing web address .As a member of plagiarism avenger we created accounts in different forum commenting sites which were related to our topic hence discussing the subject matter and linked our web address in either the comments field or the closing section. This process actually helped in providing traffic to our website as well as SEO.

### **3.6.4 SOCIAL BOOKMARKING**

Social bookmarking is a simple and a very effective process to link traffic back to the website. All one has to do is to post links of own websites on the popular social bookmarking websites to increase the traffic. Once the registering processes with these websites are done one can submit contents to them, which the readers would find it valuable and interesting to read and share with others. This increases the possibility of being on the Internet for a long time as well as drives traffic to the websites. This technique of social bookmarking was used for our website to increase the traffic and gain readers attention. Some of the websites that were used for the process of social bookmarking are as follows:

- [www.Slashdot.org](http://www.Slashdot.org)
- [www.reddit.com](http://www.reddit.com)
- [www.Folkd.com](http://www.Folkd.com)
- [www.Technorati.com](http://www.Technorati.com)

### **3.6.5 WEB 2.0**

Web 2.0 is the term given to describe a second generation of the World Wide Web that is focused on the ability for people to collaborate and share information online. Unlike before the development of the web 2 properties when the web was only able to provide information to the visitors and peers. Websites with web 2 properties provide working space for the users where they can be logged into using their user ID and password. From this they can post their contents and back link which would provide a valuable incoming traffic to the parent website. (Web 2.0)

### **3.6.6 DOCUMENT CREATION**

Document creation also one of the methods of back linking. For undertaking this process some documents needs to be created either in PDF format or DOCX or PPT format and submitting these to certain websites. These created files could contain the links which could be directed to parent website. Google crawlers could crawl upon the links hence providing more chances to be ranked

### **3.6.7 EDU AND GOV LINKS**

As we know COM is the domain extension for a commercial website similarly EDU is the domain extension for Education websites (Universities, Colleges, etc.) GOV is the domain extension for a State. EDU and GOV sites are usually ranked higher than the normal sites; hence having an inbound link in those websites to the designated websites adds value to our websites hence increasing the flow of traffic to our websites. Google algorithms are programmed to look for credible backlinks to a website, and those from EDU and GOV sites are deemed highly credible. (WALKER, Lorrie, 2012)

## **3.7 ON SITE SEO**

Unlike the offsite SEO as described earlier on site SEO is carried out within the website in terms of contents and Meta tags. On site SEO is more about having the best keywords for each page and making the page contents relevant to those keywords. This process of optimization is fully under our control and if done correctly it will change the way that search engines see our websites. It can either hurt or help our search engine results page SERPs (CARREL, Jacqui, 2012)

There are different aspects of onsite SEO which are explained in section 3.7.1-3.7.3

### **3.7.1 CONTENT**

Content is the king to any website. Contents in the websites should be such that the audience of the website will find it valuable and engaging. Apart from the contents in each page, which has to be, relevant to the keywords the way pages are formatted also matters the most. Every page in the website should have something for the user to stick on to the page either by including bold headlines or some phrases which grabs the

user's attention. Including some pictures in the Webpages also helps draw users attention, fonts size, background color are also important from the user point of view. (HUBSPOT, 2012) (CARREL, Jacqui, 2012)

### **3.7.2 KEYWORDS PLACEMENT**

One should focus on the number of the keywords that are placed in the web pages. Some people believe that overdosing of the keywords could result in attaining good SERP, which is not true. Overdoing of the keywords on the pages could actually get penalized by Google; therefore the amount of the keywords on a page has to be critically examined. The number or the frequency of using the keywords in a page is known as the keyword density. Generally the gurus suggest the keyword density to be around 2 to 3 percentages. (FLEISCHNER, Michael H., 2011)

According to (FLEISCHNER, Michael H., 2011) he describes the following use of the keywords to attain maximum profitability for the website.

- Placing the keywords in the title tag, description tag, keyword tag and the alt tag.
- Placing the keywords in an <h1>, <h2>, and/or <h3> tag.
- Placing the keywords in the first 25 words of the page.
- Placing the keywords in the last 25 words of the page.
- Using bold keywords at least once in the webpage.

### **3.7.3 SITEMAPS**

Sitemaps is referred to the page in the website that contains all the information about the website. It provides access to all other pages in the website. According to (FLEISCHNER, Michael H., 2011). There are generally two purposes of the sitemaps

- Makes it easy for visitors to find contents in the site
- Enables search engines spider the websites quicker.

Mostly the sitemaps are created in HTML or XML, which is an easy task for most of the people using an HTML editor. The sitemap has to have a single page which links the other most important pages in the website. This site map has to be updated regularly, which allows the contents to be updated.

All the aforementioned procedures were executed to our newly developed website [www.plagiarism-avenger.com](http://www.plagiarism-avenger.com) and the outcomes were analyzed to figure out the flow of traffic to our website that was generated from various means and territories.

### **3.8 GOOGLE ANALYTICS**

Google Analytics is a service offered by Google that generates detailed statistics about a website's traffic and traffic sources and measures conversions and sales. Google analytics can be used to see where particularly a click for a website has come from, for instance whether it is from the search engines, or from the social media such as Facebook, tweeter, from referrals, e -mail marketing and so on.

All these statistics are then saved in the form of a data and then can be analyzed and interpreted later on. Using these data from the Google analytics one can easily make decisions such as the increment/decrement in the traffic, support decision making, and to figure out how a particular search word or a phrase has implications in the traffic generated. (Google Analytics, 2013)

My Dashboard

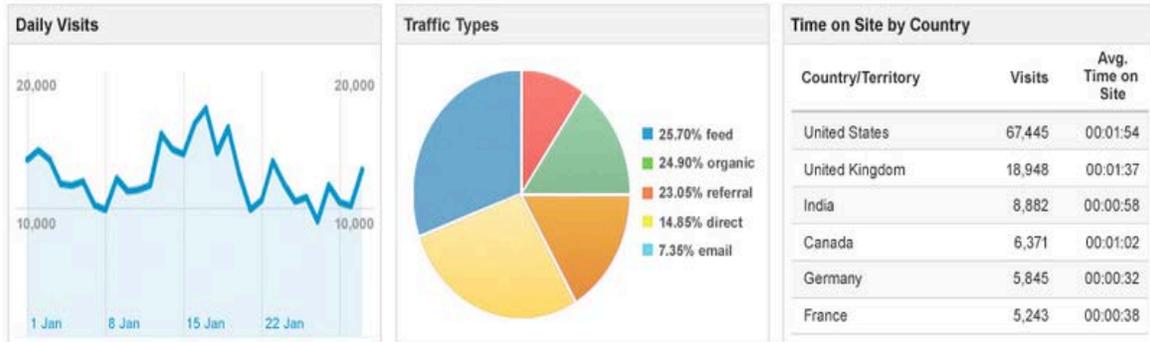


Fig 8 Statistics on a website according to the types of visits (Google Analytics, 2013)

## **4. METHODOLOGY**

### **4.1 RESEARCH METHODS**

The research method that will be used in this thesis is both qualitative and quantitative research. Qualitative analysis was used to find out a complete, detailed description on the topic whereas in the other hand quantitative analysis was done to classify the features, count them and construct statistical models to explain the things that were observed during the analysis.

The basic purpose of this thesis/research is to find the effectiveness of search engine optimization in the Google listings and Internet marketing that follows. In the first part of the research qualitative analysis was done which includes the literature review of the topic from previous studies and also the inclusion of theories that were implied in the work done during the practical training tenure.

To make the most of the chosen topic and to find out people's perception on the subject, questionnaires were sent which 52 answered. This survey results along with the results from Google analytics were the source of qualitative data. Questionnaires were prepared and sent to the respondents using online free software called kwik survey, which is very user friendly and easy to use software.

### **4.2 DATA COLLECTION**

Data collection is the process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer stated research questions, test hypotheses, and evaluate outcomes. (responsible conduct in data management)

The sources from which the data are abstracted can be divided into three categories

Primary sources are the original material that has not been interpreted or evaluated which can include journal articles, newspaper articles, surveys etc. Similarly secondary sources are the ones that have been abstracted from the primary sources and are already gone through interpretations and evaluations. Some examples include dictionaries, journal articles etc. Similarly tertiary data are those that are abstracted from the primary as well as the secondary data and are more distilled in nature .for instance fact books, guidebook, textbooks etc. (Data Collection Methods)

Data while preparing this thesis /research has been abstracted from all the sources.

Collection of data in the preparation of this research paper/ thesis was from three main sources. Literature review from the books, online materials and articles were used to collect information for the theoretical aspect of the research, similarly survey strategy was used to collect data from the experts and others related to the field of SEO by sending a questionnaire which included eight questions and were answered by 52 people. Primary reason for selecting the experts for answering the questionnaires was that they would have a good knowledge in the field and would provide relevant information. Students from Turku University of Applied Sciences information technology unit were also sent the questionnaires, as they would also be the ones who would be keen in the topic and have information relating to the field.

Similarly data was taken/abstracted from Google Analytics tool of plagiarism-avenger.com which provided with all the performance statistics of the website since the initiation of SEO it.

## 5. CASE STUDY

The Case Study in “Search Engine Optimization and Its Implications in Internet Marketing” started with the work placement done in Enterprise Engine which is a EU-based management consultancy, business, IT and academic concept selling firm, offering individuals and companies an opportunity to explore, expand and exploit their potential.

New software (plug-in) was developed by the developers and was indented in selling the software online, for which the visibility in the Internet was a must. Taking this fact into consideration the process of search engine optimization was carried out.

After the process was carried out with all the theories explained above implied, the following results were found. These data were extracted from Google analytics which gives precise details of all the visits to the website and the details behind all the visits.

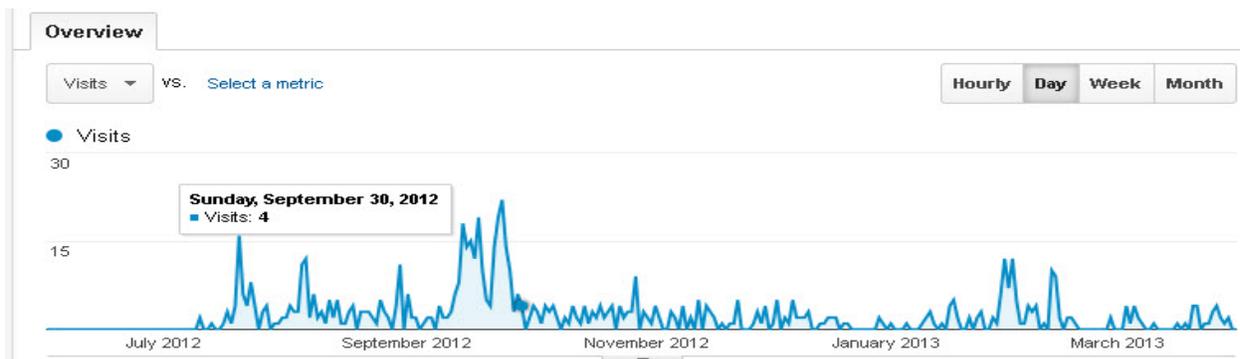


Fig 9 Overview of the visits to the website

Figure 9 above explains the number of visits by people each day from June 1, 2012 to March 31, 2013. The blue line above explains the hits/visits to the page “plagiarism-avenger.com”. Here we can see during the initial phase the blue line passes horizontally, this was the phase when SEO was just initiated. Slowly the visits to the pages started growing and during the end of September there were highest visits to the

page, which means the process of optimization that was carried on was going in the right direction.

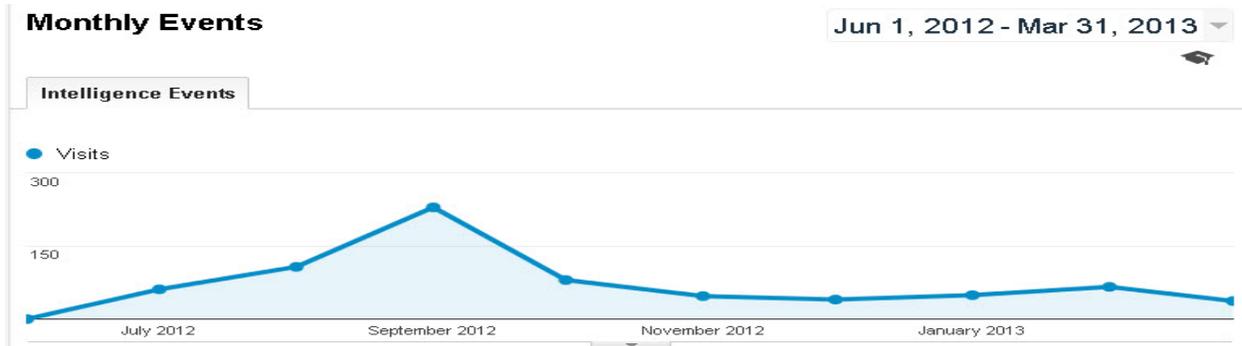


Fig 10 Visits to the website (monthly)

Similarly Fig 10 explains the monthly events of the visit to the website. The trend of the visit in the above figure shows September to be the month with a huge number of people visiting the website, this was the period when the process of SEO was at its best and vigorous. Slowly after that when the process was lagging the visits to the website also started to diminish.

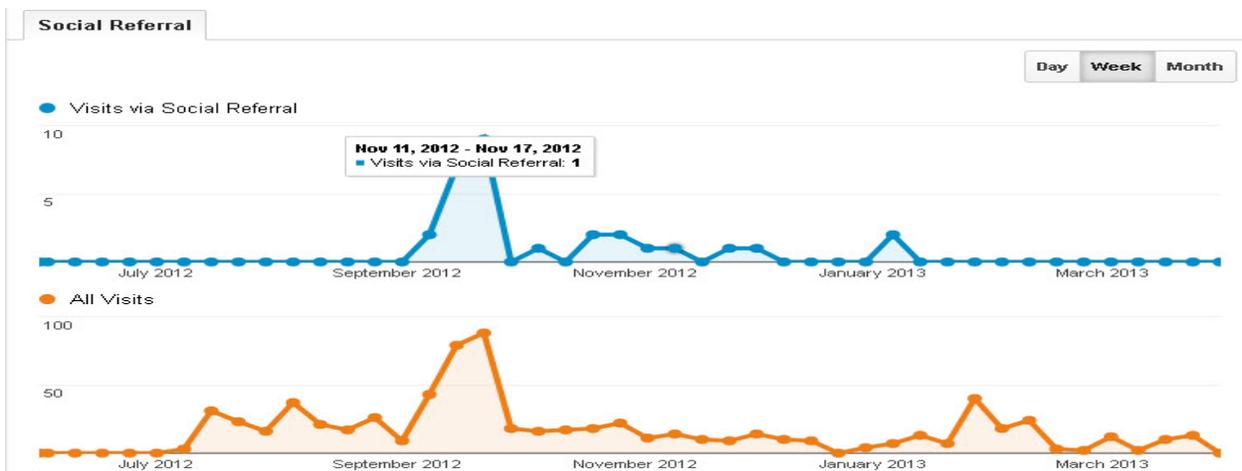


Fig 11 Visits via social referral to the website

One of the processes of gaining the visitors to the website is by the means of social referrals. Social media such as Facebook, LinkedIn also helped in attaining the traffic to the website which is shown in the figure above with the blue line. Those were the visits to the website which came through those social sites through referral. The website was

promoted through our Facebook and LinkedIn pages. The figure below Fig 12 shows the Facebook page of plagiarism avenger that was shared in our own Facebook page for promotion.



Fig 12 Facebook page of Plagiarism Avenger with likes from Facebook users

Source / Medium ?	Acquisition			Behavior		
	Visits ? ↓	% New Visits ?	New Visits ?	Bounce Rate ?	Pages / Visit ?	Avg. Visit Duration ?
	<b>716</b> % of Total: 100.00% (716)	<b>40.92%</b> Site Avg: 40.78% (0.34%)	<b>293</b> % of Total: 100.34% (292)	<b>53.35%</b> Site Avg: 53.35% (0.00%)	<b>3.35</b> Site Avg: 3.35 (0.00%)	<b>00:04:27</b> Site Avg: 00:04:27 (0.00%)
1. (direct) / (none)	<b>426</b>	38.03%	162	50.47%	3.88	00:05:45
2. google / organic	<b>191</b>	43.46%	83	59.16%	2.64	00:02:29
3. admin.statichtmlapp.com / referral	<b>30</b>	0.00%	0	33.33%	2.37	00:03:35
4. facebook.com / referral	<b>22</b>	95.45%	21	68.18%	1.82	00:00:27
5. 36ohk6dgmcd1n-c.c.yom.mail.yahoo.net / referral	<b>11</b>	18.18%	2	45.45%	3.18	00:03:16
6. plagiarism-avenger.com / referral	<b>9</b>	0.00%	0	22.22%	5.56	00:10:07
7. bing / organic	<b>6</b>	100.00%	6	83.33%	1.50	00:00:04
8. mosaichub.com / referral	<b>3</b>	100.00%	3	100.00%	1.00	00:00:00
9. linkedin.com / referral	<b>2</b>	100.00%	2	100.00%	1.00	00:00:00
10. www.goo.gl/QvB7f / referral	<b>2</b>	0.00%	0	100.00%	1.00	00:00:00

Fig 13 Source of visits to the website

The above statistics from Google analytics explains the source of the visits to the website plagiarism-avenger.com. There was a large portion of direct visits to the website which is shown on the figure above. Similarly another large portion of visitors to the website has come through Google's search which is in the organic listing shown in 2

in the figure. Likewise we can also see Facebook and LinkedIn in the lists of visits. There was some traffic to the website from the search engine such as Microsoft's Bing and these are organic as well, So no any paid promotions to the website were done. All the traffic to the website were generated naturally or organically.

A large portion of people visiting the website from the organic listing of Google suggests that people were using the keywords such as “plagiarism”, “plagiarism avenger” and so on to reach the Google page of our website and which was ranked in the Google's listings.

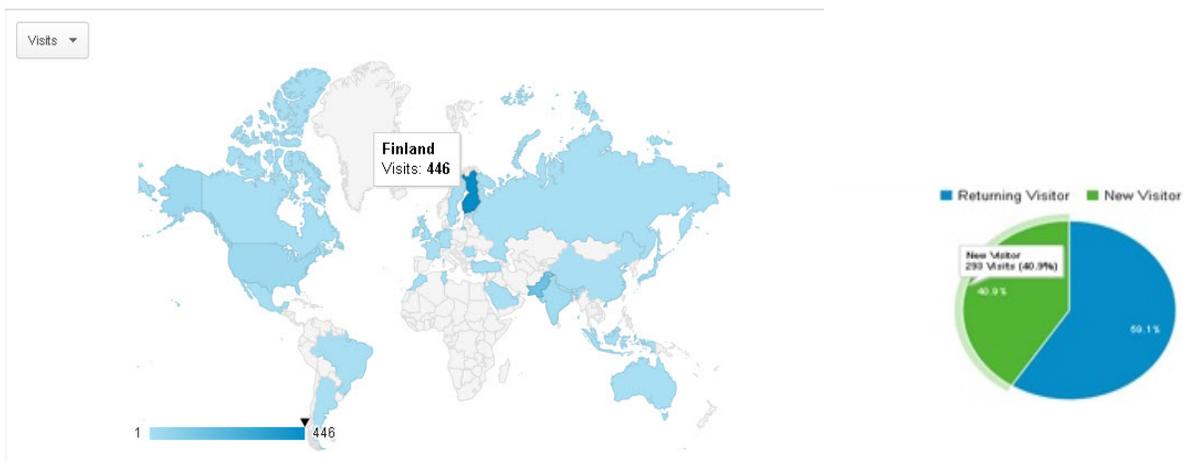


Fig 14 Website visits country wise

Figure 14 shows the visits to the website [plagiarism-avenger.com](http://plagiarism-avenger.com) country wise. There were visitors to the website from around the world. Finland was the country with the largest number of visitors; similarly other country shared the number of visits in almost equal number. The figure that follows i.e. Figure 15 gives the exact number of visitors to the website and their territorial breakdown.

Country / Territory ?	Acquisition			Behavior		
	Visits ? ↓	% New Visits ?	New Visits ?	Bounce Rate ?	Pages / Visit ?	Avg. Visit Duration ?
	716 % of Total: 100.00% (716)	40.92% Site Avg: 40.78% (0.34%)	293 % of Total: 100.34% (292)	53.35% Site Avg: 53.35% (0.00%)	3.35 Site Avg: 3.35 (0.00%)	00:04:27 Site Avg: 00:04:27 (0.00%)
1.  Finland	446	30.04%	134	51.57%	3.02	00:03:49
2.  Pakistan	158	38.61%	61	41.77%	5.35	00:08:37
3.  United States	32	100.00%	32	87.50%	1.34	00:00:12
4.  India	19	52.63%	10	57.89%	2.32	00:03:18
5.  Sweden	9	88.89%	8	88.89%	1.67	00:00:08
6.  United Kingdom	6	100.00%	6	83.33%	1.17	00:00:00
7.  Indonesia	5	100.00%	5	60.00%	2.80	00:01:56
8.  Brazil	4	50.00%	2	50.00%	2.25	00:00:27
9.  Australia	3	100.00%	3	100.00%	1.00	00:00:00
10.  Canada	3	100.00%	3	66.67%	1.33	00:00:21

Fig 15 Territorial breakdown of the visits to the website

According to figure15, Finland is the country with the highest number of visitors; likewise to follow in the number of visits to the website were Pakistan, United States, India, and Sweden and so on. Column three and four in the figure explains the rate and the new visits to the website which was almost 41 % or 293 visits which is a significant number. This data of new visitors if compared with the organic search results in Fig 13 and the direct hits to the website gives us information regarding the availability of the content in the internet and its reach to the people.

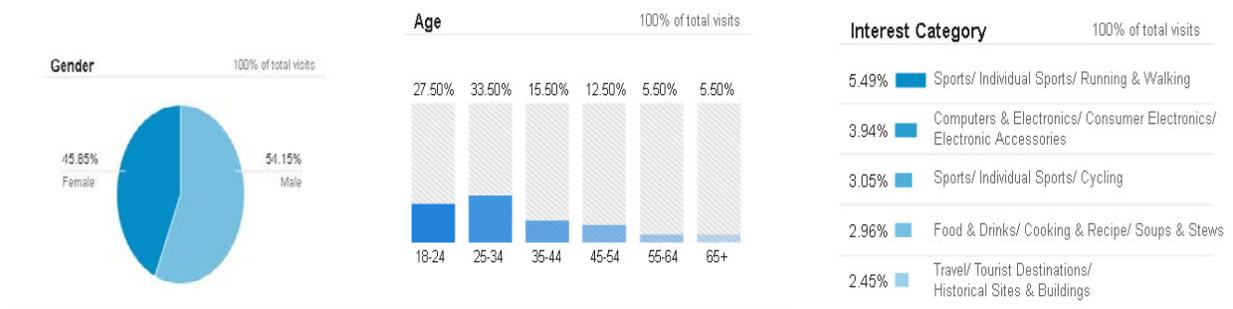


Fig 16 Gender age and interest breakdown of the website visitors

Figure 16 extracted from the Google analytics shows the breakdown of the visitors to the website according to gender and the age group of a person. Statistics show that males have visited the website slightly more than the females and most of the visitors come in the age group of 25-34 which is followed by people of age group 18-24. The plug-in that was created was especially useful to the content writers and people devoting their time in the internet for a living. The age breakdown suggests that there are all age groups of people engaged in these tasks but people within the age group 25-34, 18-24 and 35-44 are more active in the field.

Interest category of the people suggests that there are people who are interested in computers and electronics are among the ones who have visited the website, the people with interest in sports, food and drinks, travel and tourism had also visited the website, this suggests that there are people with varied interests who have visited the website's page.

Similarly there was an effort to look into the browsers people used to browse the website. The figure below i.e. Fig 17 shows that Google's chrome is the one most of the people used to browse the pages. Similarly Firefox and safari were others used by the users to visit the pages.

Browser ?	Acquisition			Behavior		
	Visits ? ↓	% New Visits ?	New Visits ?	Bounce Rate ?	Pages / Visit ?	Avg. Visit Duration ?
	<b>716</b> % of Total: 100.00% (716)	<b>40.92%</b> Site Avg: 40.78% (0.34%)	<b>293</b> % of Total: 100.34% (292)	<b>53.35%</b> Site Avg: 53.35% (0.00%)	<b>3.35</b> Site Avg: 3.35 (0.00%)	<b>00:04:27</b> Site Avg: 00:04:27 (0.00%)
1. <a href="#">Chrome</a>	<b>352</b>	36.93%	130	52.84%	3.14	00:04:16
2. <a href="#">Firefox</a>	<b>220</b>	38.64%	85	45.00%	4.32	00:06:45
3. <a href="#">Safari</a>	<b>75</b>	22.67%	17	74.67%	1.91	00:01:24
4. <a href="#">Internet Explorer</a>	<b>56</b>	91.07%	51	60.71%	2.96	00:01:28
5. <a href="#">Android Browser</a>	<b>6</b>	66.67%	4	33.33%	2.50	00:01:08
6. <a href="#">Opera</a>	<b>5</b>	80.00%	4	60.00%	3.80	00:00:34
7. <a href="#">Mozilla Compatible Agent</a>	<b>1</b>	100.00%	1	100.00%	1.00	00:00:00
8. <a href="#">Safari (in-app)</a>	<b>1</b>	100.00%	1	100.00%	1.00	00:00:00

Fig 17 Browser specific visit to the website

This data also shows the interest of the people in different browsers and Google's chrome tops the chart. People browsing through Firefox stayed in the pages for longer time as compared to other browsers that can be seen in the last column of Figure 17.

Device Category ?	Acquisition			Behavior		
	Visits ? ↓	% New Visits ?	New Visits ?	Bounce Rate ?	Pages / Visit ?	Avg. Visit Duration ?
	<b>716</b> % of Total: 100.00% (716)	<b>40.92%</b> Site Avg: 40.78% (0.34%)	<b>293</b> % of Total: 100.34% (292)	<b>53.35%</b> Site Avg: 53.35% (0.00%)	<b>3.35</b> Site Avg: 3.35 (0.00%)	<b>00:04:27</b> Site Avg: 00:04:27 (0.00%)
1. desktop	<b>689</b>	40.06%	276	53.41%	3.39	00:04:33
2. mobile	<b>17</b>	76.47%	13	52.94%	2.47	00:02:15
3. tablet	<b>10</b>	40.00%	4	50.00%	2.60	00:00:38

Mobile Device Info ?	Acquisition			Behavior		
	Visits ? ↓	% New Visits ?	New Visits ?	Bounce Rate ?	Pages / Visit ?	Avg. Visit Duration ?
	<b>27</b> % of Total: 3.77% (716)	<b>62.96%</b> Site Avg: 40.78% (54.39%)	<b>17</b> % of Total: 5.82% (292)	<b>51.85%</b> Site Avg: 53.35% (-2.81%)	<b>2.52</b> Site Avg: 3.35 (-24.90%)	<b>00:01:39</b> Site Avg: 00:04:27 (-62.79%)
1. Apple iPhone	<b>10</b>	80.00%	8	70.00%	2.50	00:02:44
2. Apple iPad	<b>6</b>	50.00%	3	33.33%	3.17	00:00:51
3. Asus TF700T Transformer Pad TF700T	<b>4</b>	25.00%	1	75.00%	1.75	00:00:19
4. (not set)	<b>2</b>	50.00%	1	50.00%	2.00	00:00:14
5. Google Nexus S Samsung Nexus S	<b>2</b>	50.00%	1	50.00%	3.50	00:02:40
6. HTC Desire HD	<b>1</b>	100.00%	1	0.00%	2.00	00:00:46
7. HTC X515 EVO 3D	<b>1</b>	100.00%	1	0.00%	2.00	00:00:13
8. Nokia N96	<b>1</b>	100.00%	1	0.00%	2.00	00:04:13

Fig 18 Device used to visit the website and the information on mobile devices

The visit to the website was just not limited to the computers, there were people accessing the website [www.plagiarism-avenger.com](http://www.plagiarism-avenger.com) in different devices. A large section of people 689 of 716 were using their computers to go through the pages. And the visit to the page from the mobile devices came from the devices like the apple's I phone, I pad, Asus pad, Google's nexus phone, HTC desire and so on.

## 6. RESEARCH ANALYSIS

Survey was done to analyze if the results obtained from the survey correspond with the theory as explained in the literature review. The data obtained would be valuable and would help in gaining discrete results after analyzing the demographics. The data were collected from the students of Turku University of Applied Sciences, business and information technology unit. The questionnaires were also sent to the experts in SEO of the company where I was working on. Questionnaires were sent to people via social media, emails and other forms. There were 52 people who answered the survey and the analysis of survey results is done as under.

People were asked to include their area of focus or their interests and the result is seen in the pie chart below 23.21% of people had their interest in search engine optimization, 16% of people's area of focus was seen to be web development where as others, 55.36 % of people were engaged in something different or had expertise in something else.

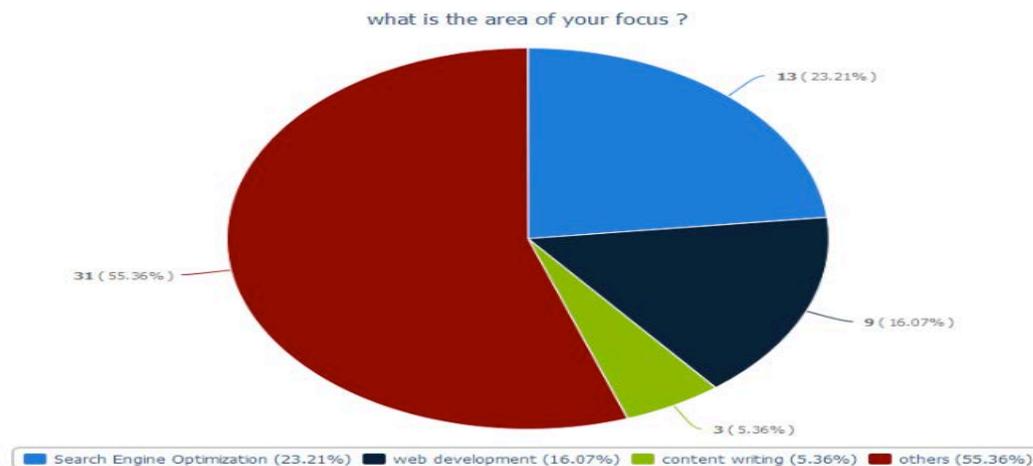


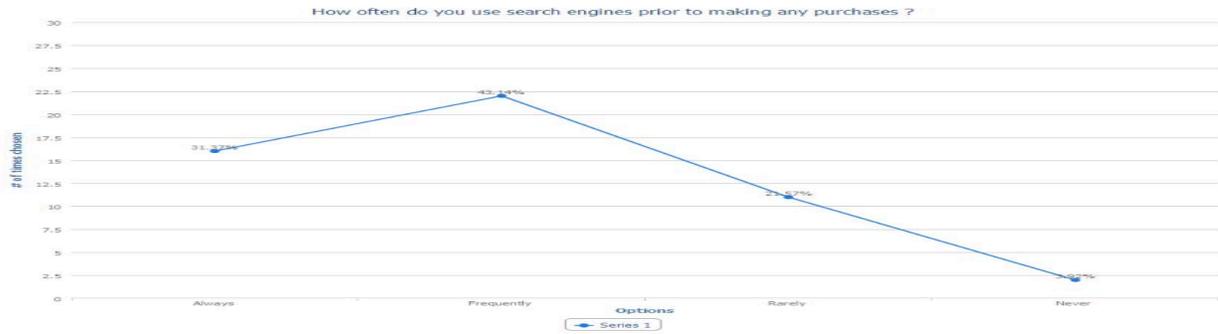
Fig 19 Participant's area of focus or expertise

Similarly another research question was to know if online marketing really helps in cost saving for new and medium sized enterprise .The results from the participants showed that that 78 % of people believe that online marketing really helps in cost saving for new and medium sized enterprises whereas only 3 % of the total respondents thought that it wasn't the case.



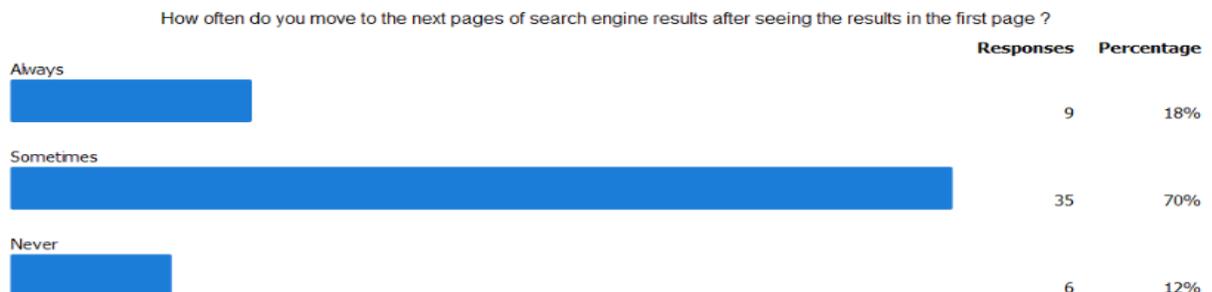
Fig 20 Opinion of participants in the effectiveness of online marketing for cost saving

To find out the purchasing behaviour of the individuals question was asked if they actually use search engines such as Google, Bing and so on to find out something they are looking for and to analyse the product beforehand. The result of the question showed that 31.37 % of people always used search engines prior to making any purchase and 43.14 % of them frequently used search engines .It was only almost 4% of them who never used any kind of search engines to find any information on the product or to find the product to be purchased beforehand.



**Fig 21 Use of search engines prior to making any purchases**

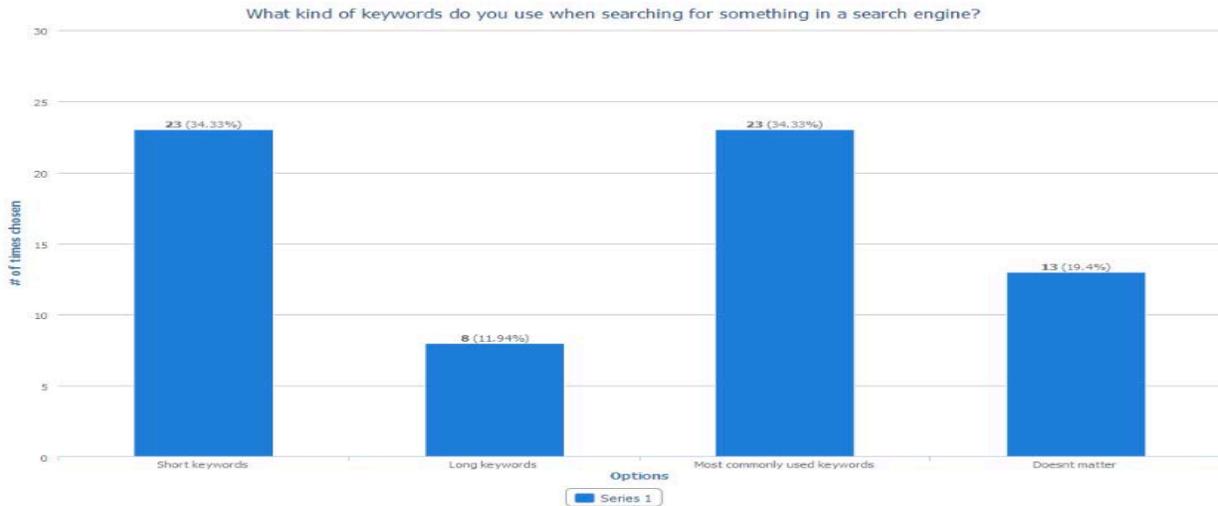
After finding out the use of search engines prior to making any purchases people were asked if they jump to the next page of the search engines after viewing the results in the first page. 18 % of people answered that they actually moved on to the next page whereas there were many people i.e. 70% of them who sometimes moved on to the next page and 12% never moved on to the next page after seeing the results on the first page. This suggests that being visible in the first page in the search engine is important to find the targeted customers so they don't move to the next page.



**Fig 22 Frequency of moving to the next page of search engines.**

Next question was to know what kind of keywords people actually use to find out the things they were looking for in the search engines. 34 % of people used short keywords for their search whereas the same number of people used the most common keywords, only a few of them were actually going for long tailed keywords this means the results

people were getting out of the search pages were the general ones and not concentrated on a fixed thing. There are a lot of pages, which use the same keywords to be visible in the search engine. On top of that there are the paid search results that appear above the organic search results. Therefore being well known in the Internet is of utmost importance if the listing in the search engine has to be in the first page to find out potential customers.



**Fig 23 Keywords used in the search engines**

The participants were asked if social media marketing helps online/small business to gain popularity and to increase the sales and the positive result of almost 84% respondents suggests that social media marketing really helps in small and online businesses. This was the case with plagiarism-avenger.com, which tried to sell the product online hence social media marketing done by us during the process of search engine optimization is justified.

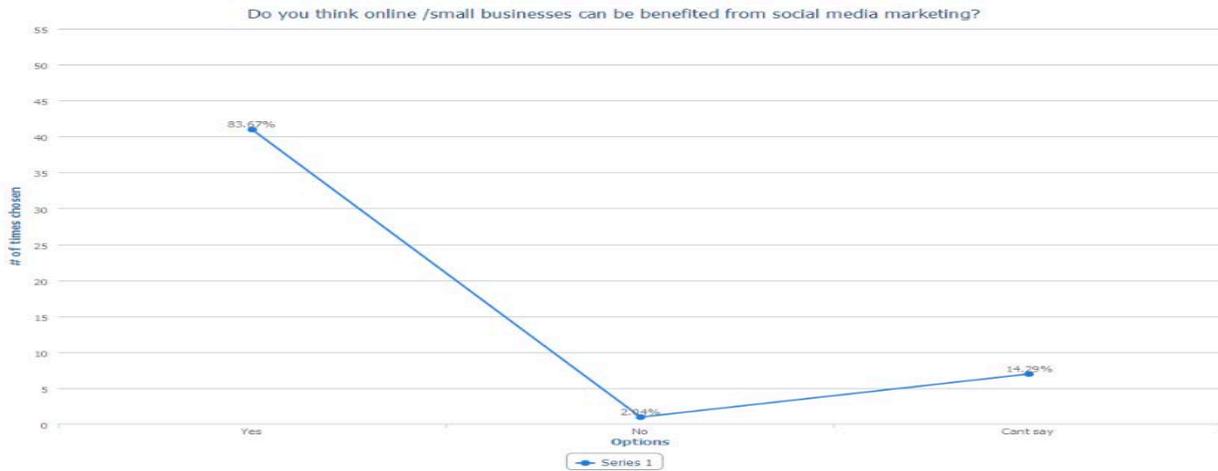


Fig 24 Social media marketing as an important tool for online/small business

It was essential to find the responses from the participants to the question whether search engine optimization can lead to a proper Internet marketing or not. The response of 44 people 88 % of them, with a positive answer showed that it is a very essential tool for Internet marketing.

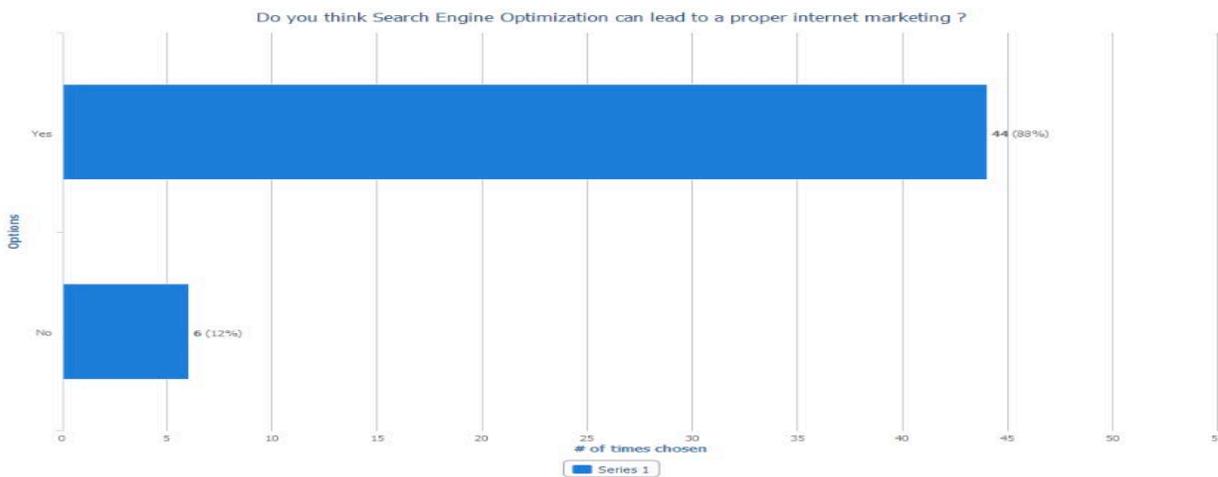


Fig 25 Search engine optimization for Internet marketing

In the final question of the survey, the participants were asked if there are any other benefits of search engine optimization. 37% of the total respondents thought that search engine optimization had the following benefits:

- Ranked high in search engines
- Increases traffic to the website
- Improve social media activity
- Increase the number of potential customer

People also thought the individual importance of the above-mentioned points as the benefits of SEO.

This response from the people shows that the importance of search engine optimization is just not limited in a certain caption.

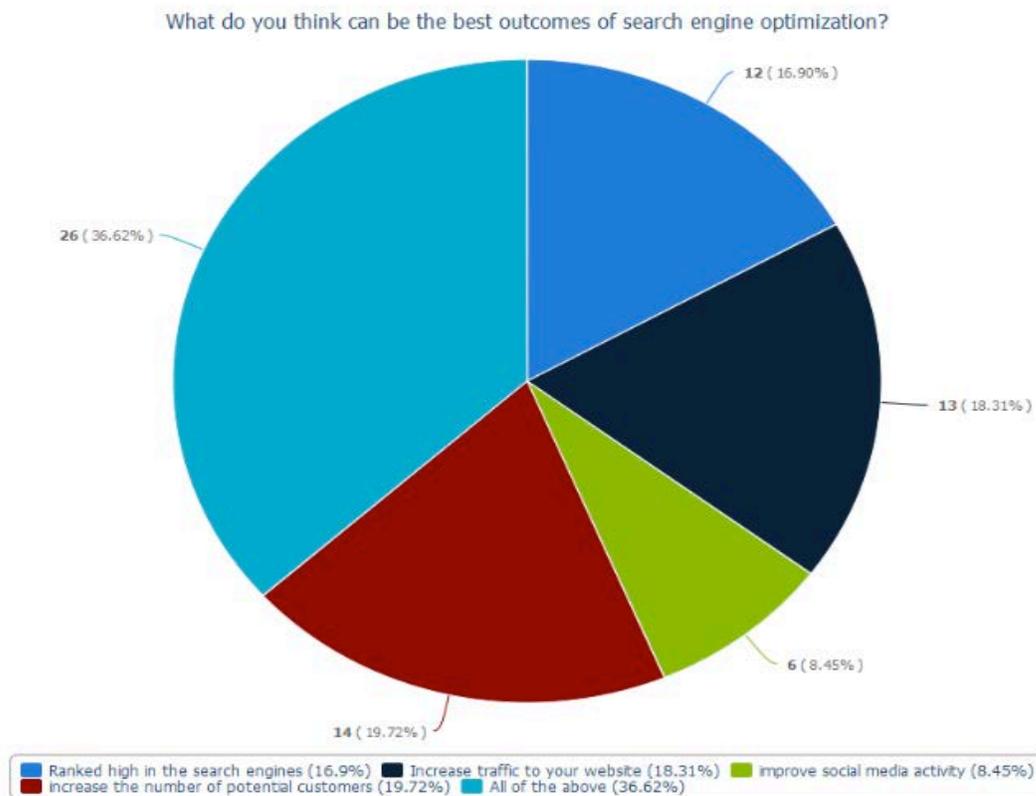


Fig 26 Benefits of Search Engine Optimization

## 7. CONCLUSION

The main goal of this paper was to determine if the rules/techniques of search engine optimization as described by the gurus really works in order to make a newly formed website/internet business visible in the search listings. After going through all the literature reviews, online sources and practically using those methods in a newly formed website [www.plagiarism-avenger.com](http://www.plagiarism-avenger.com) which was also the website for whom the practical training was done, under the parent company [www.enterprise-engine.com](http://www.enterprise-engine.com) the results seem to be positive, which means that those techniques described in the literatures for listing a page in search engine really works.

To come to the conclusion detailed statistics from Google analytics for the website along the survey results from people were used. Getting ranked in the first page of search results in Google or other search engines in the organic listing means that there would be more and more people to visit the website. This creates the potentiality or will actually help in the marketing of the product that is being intended to sell in the website. Plagiarism avenger a content monitoring plugin had gone through the same procedure.

Below is the final version taken from the Google search for the key word plagiarism and the website's listing in Google is visible. Figure 27 shows that an entire search page has been covered with the results from the website [www.plagiarism-avenger.com](http://www.plagiarism-avenger.com). Similar case for the image search where an entire page is covered with the pictures related to the website.

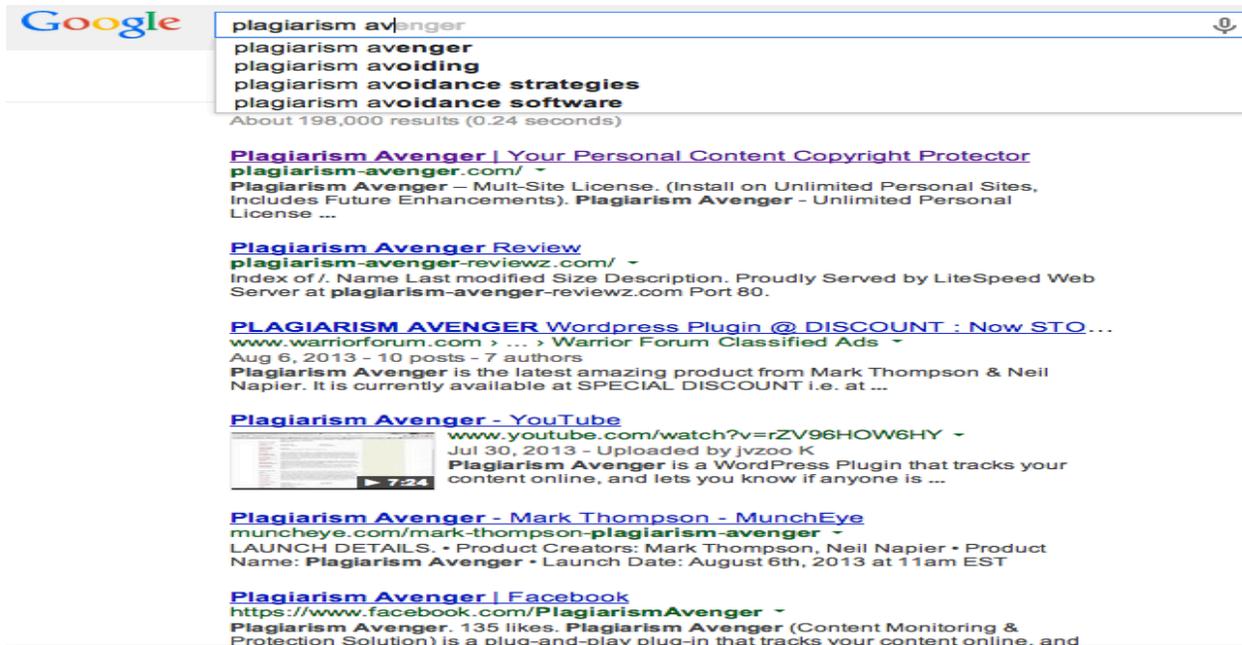


Figure 27: Google listing of plagiarism-avenger.com

Since the listing of the website in the search engine, the product that was on sale on the website which is a content monitoring plugin also was successful in making sales to the customers. The entire website [www.plagiarism-avenger.com](http://www.plagiarism-avenger.com) that was based in Turku, Finland to the parent company [www.enterprise.engine.com](http://www.enterprise.engine.com) has now been sold to the buyers from the united states for a good sum where they are still managing to sell the content protection solution online.

This success story of the company reflects that search engine optimization has a huge implication in Internet marketing.

The following were the research questions which were intended to be answered by the end of this thesis /research

- Is search engine optimization an effective tool for Internet marketing?
- Is search engine optimization effective to get listed /ranked in Google search?
- Is it relevant for online/small and medium enterprises to perform search engine optimization?

With all the explanations and the relevant case study presented above, the research questions were answered. Search engine optimization has proven to be an effective tool for internet marketing in a form that it comes along with the improvement of the search listing in the search results, hence making it more visible in the search engines, and the higher the visibility the greater is the marketing.

Search engine optimization is a very effective tool to get listed/ranked in Google search and in other search engines as well. The research and the data from Google analytics showed that during the initial months when optimization was not done it wasn't listed in the search results whereas after a couple of months of optimization there has been significant improvement in the listing in the Google search which can also be seen in figure 27.

Online /small and medium enterprises can get a lot from search engine optimization as has the developers/entrepreneurs in plagiarism avenger done. The product, a content monitoring plugin which was created had a huge potential. With the mixture of SEO of the website which led to its visibility in the web pages the company had made profits selling the entire website along with the copyright of the content monitoring plugin that was developed.

The data were collected from the students of Turku University of Applied Sciences, business unit and information technology unit. The questionnaires were also sent to the experts in SEO of the company where I was working on. The research would be much more applicable if results from many other experts were also collected.

Furthermore, the data collected from Google Analytics were limited to a certain period of time, once the website was performing well in the Google listings SEO activity was stopped, but for better rankings / listings or visibility the process of SEO has to be carried out regularly which does not let it slip from its position in the Google listing.

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## 9. APPENDIX

The set of questionnaire addressed to the people to gather relevant demographics.

### What is the area of your focus/expertise?

1.  Search Engine Optimisation
2.  Web development
3.  Content writing
4.  others

### Do you think online marketing is a cost saving strategy for new and medium sized enterprises?

1.  Yes
2.  No
3.  Cant say

### How often do you use search engines prior to making any purchases?

1.  Always
2.  Frequently
3.  Rarely
4.  Never

### How often do you move to the next pages of search engine results after seeing the results in the first page?

1.  Always
2.  Sometimes
3.  Never

**What kind of keywords do you use when searching for something in a search engine?**

1.  Short keywords
2.  Long keywords
3.  Most commonly used keywords
4.  Doesn't matter

**Do you think online /small businesses can be benefited from social media marketing (Facebook, twitter, YouTube etc.)?**

1.  yes
2.  No
3.  can't say

**Do you think Search Engine Optimization can lead to a proper Internet marketing?**

1.  Yes
2.  No

**What do you think can be the best outcomes of search engine optimization?**

1.  Ranked high in the search engines
2.  Increase traffic to your website
3.  Improve social media activity
4.  Increase the number of potential customers
5.  All of the above