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CONTENT-CENTERED METHOD FOR SEARCH ENGINE OPTIMIZATION

Master´s Thesis
in Information System Science

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Turun yliopisto University of Turku	**ABSTRACT**		☒ Master´s thesis ☐ Licentiate´s thesis ☐ Doctor´s thesis	

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Abstract

Value of online business has grown to over one trillion USD. This thesis is about search engine optimization, which focus is to increase search engine rankings. Search engine optimization is an important branch of online marketing because the first page of search engine results is generating majority of the search traffic.

Current articles about search engine optimization and Google are indicating that with the proper use of quality content, there is potential to improve search engine rankings. However, the existing search engine optimization literature is not noticing content at a sufficient level. To decrease that difference, the content-centered method for search engine optimization is constructed, and content in search engine optimization is studied.

This content-centered method consists of three search engine optimization tactics: 1) content, 2) keywords, and 3) links. Two propositions were used for testing these tactics in a real business environment and results are suggesting that the content-centered method is improving search engine rankings.

Search engine optimization is constantly changing because Google is adjusting its search algorithm regularly. Still, some long-term trends can be recognized. Google has said that content is growing its importance as a ranking factor in the future. The content-centered method is taking advance of this new trend in search engine optimization to be relevant for years to come.

Keywords	Search engine optimization, internet marketing, Google
Further information	

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Tiivistelmä

Internet-liiketoiminnan arvo on jo yli biljoona dollaria. Tämä tutkielma käsittelee hakukoneoptimointia, jonka avulla voidaan ajaa liikennettä verkkosivuille ja kasvattaa verkkoliiketoimintaa. Hakukoneoptimoinnissa keskitytään parantamaan hakukonesijoituksia maksettujen mainoksien sijaan.

Sisällön merkitys hakukonetuloksiin vaikuttavana tekijänä on tunnistettu hakukoneoptimoijien keskuudessa. Lisäksi Google on kertonut sen merkityksen kasvavan tulevaisuudessa. Hakukoneoptimoinnin tutkimuksessa sitä ei kuitenkaan käsitellä kattavasti. Tässä tutkielmassa muodostetaan sisältökeskeinen menetelmä hakukoneoptimointiin kaventamaan tätä tutkimusaukkoa. Se muodostetaan hakukoneoptimointi- ja sisältömarkkinointikirjallisuuden pohjalta.

Sisältökeskeinen menetelmä koostuu kolmesta eri hakukoneoptimoinnin keinosta: 1) laadukkaasta sisällöstä, 2) avainsanoista ja 3) linkkien hankinnasta. Sisältökeskeisen menetelmän toimivuutta testataan kahden proposition avulla oikeassa liiketoimintaympäristössä. Tulokset osoittavat, että sisältökeskeisen menetelmän käyttäminen parantaa hakukonesijoituksia.

Hakukoneoptimointi kehittyy jatkuvasti Googlen haku-algoritmin kehittyessä. Silti voidaan tunnistaa muutamia hakukoneoptimoinnin pitkäaikaisia suuntauksia kuten linkkien hankinta ja kirjoitetun sisällön hyödyntäminen optimoinnissa. Sisältökeskeinen menetelmä hyödyntää hakukoneoptimoinnin uusimpia suuntauksia, jolloin tämä menetelmä säilyy ajankohtaisena mahdollisimman pitkään.

Asiasanat	Hakukoneoptimointi, Internet-markkinointi, Google
Muita tietoja	

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List of acronyms

B2C	Business-to-consumer
CMS	Content management systems
CTR	Click-through rate
H1	Main heading of a web page
PPC	Pay-per-click
PR	PageRank
SEM	Search engine marketing
SEO	Search engine optimization
SERP	Search engine result page
SME	Small and medium-sized enterprises
URL	Uniform resource locator
XML	Extensible markup language

1   INTRODUCTION

1.1   Importance of search engine optimization

The importance of online business is growing fast and the value of worldwide B2C e-commerce is already over one trillion USD (eMarketer/Ecommerce, 2014). This sets challenges for companies to achieve better online visibility than competitors. *Search engine marketing (SEM)* is one of the fastest growing online marketing channel (Shih, Chen, & Chen, 2013), and it provides possibilities to reach potential customers.

SEM consists of two sub-areas that are *search engine optimization (SEO)* and *pay-per-click (PPC)* advertising (Shih et al., 2013). The objective of search engine optimization is to acquire visitors through organic search results, and the objective of PPC advertising is to acquire visitors through paid ads provided by the search engines. Properly executed search engine optimization can affect positively to paid advertising as well because search engine optimization is increasing site's relevance in Google Search. Relevant sites are getting cheaper clicks in paid advertising. Figure 1 illustrates alignment of search engine optimization as a part of online marketing.
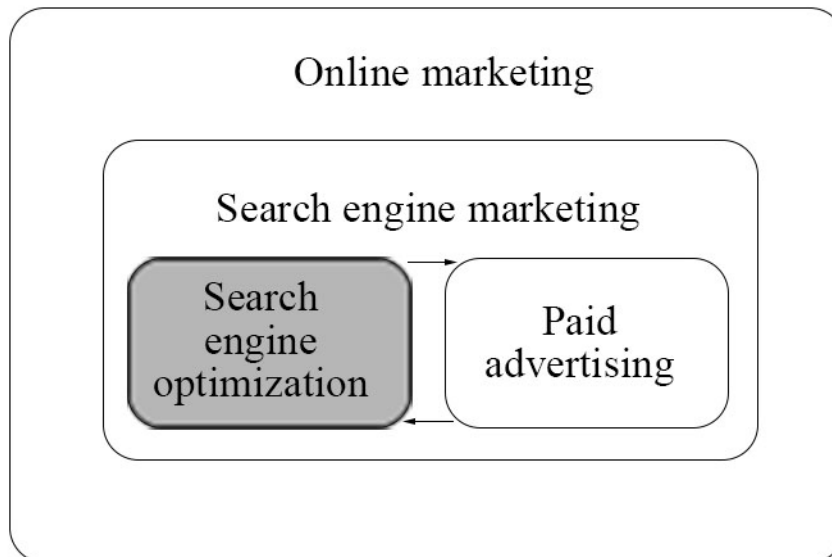
Figure 1 Research area

Search engine marketing is huge business. Indicator of its importance is that three out of five of the most visited sites globally are search engines (Alexa/TopSites, 2015). Organic search engine results are a major channel for getting traffic. In addition, organic results are directing more traffic to websites than paid advertising of search engines

(Baye, De los Santos, & Wildenbeest, 2014). Search engine optimization campaigns have potential in terms of achieving a substantial increase in website traffic, for example, Malaga (2007) conducted search engine optimization project and achieved 30% *return on investment (ROI)* and more than 500% increase in the traffic.

Search engine optimization is a practice that demands regular attention (Zhang & Dimitroff, 2005). Search engine rankings can vary from time to time. Reason for this is that search engines can change the factors that are determining which sites are having good position in the search results (Kritzinger & Weideman, 2013). For example, Google performed 7 major algorithms updates in 2014, and these are only updates, which had a considerable effect on the search results (Hubspot/GoogleUpdates, 2014).

The search engine results are divided into two categories: organic search results and links from paid advertising (Baye et al., 2014). Search engine optimization focuses solely on improving organic results. Improved search engine rankings are correlating directly as increased traffic to the website (Zhang & Dimitroff, 2005). Figure 2 illustrates this.
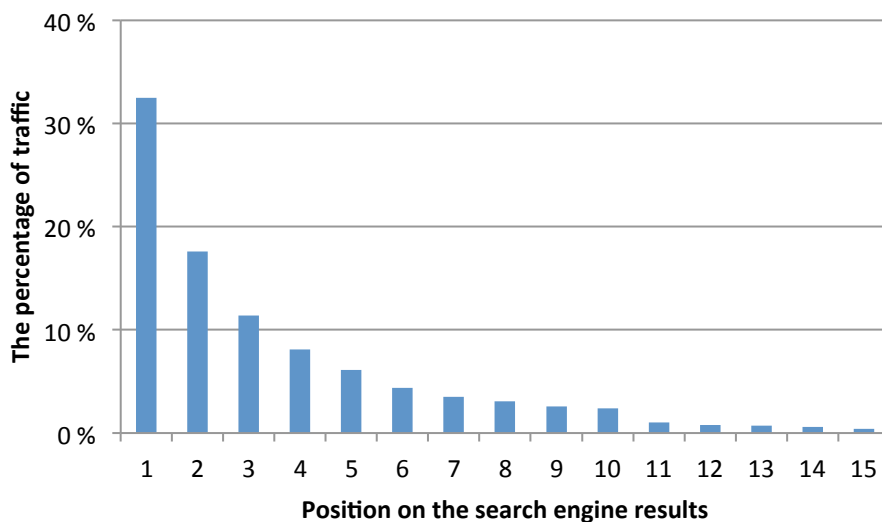
Figure 2 Google traffic share by keyword rank (Chitika/GoogleTraffic, 2013)

The first position of Google generates over 30% of the total traffic. The second position generates over 15% of total traffic that is already a half less than traffic generated from the first position. The third position generates about 11% of traffic. There is a huge difference in traffic already within the first three positions. In addition, the first page of Google generates almost 92% of the all traffic (Chitika/GoogleTraffic, 2013). These numbers are indicating the importance of search engine optimization. Without having a link in the first page of the search engines results, traffic from this channel is low.

In the early days of search engines, there were several small search engine providers (Zhao & Tse, 2011). Lately, the market of search engines have consolidated and it is dominated by a few large players (WebcertainGroup/Blog, 2013):

- Google,
- Baidu,
- Yahoo!,
- Yandex,
- Bing.

Google is the undisputed leader in terms of global searches. In Finland, Google has 97% market share (Statcounter/SearchEnginesFinland, 2014). Baidu has the largest market share in China and Yandex dominates the search engine market in Russia. Apart from these few local exceptions, Google dominates the majority of markets. This thesis focuses only improving search engine results on Google's search engine.

1.2   Purpose of the study

Search engine optimization is closely related to the constant evolution of search engines. Google Search is getting new features, and factors affecting search results are changing regularly (Tober, Hennig, & Furch, 2014). Search engine optimization practices need to follow the newest trends set by Google, and for that reason, there is a constant need for research, practice and re-evaluation of search engine optimization methods (Zhang & Dimitroff, 2005).

In business environment, new SEO trends are followed on a regular basis. However, in academic research, it naturally takes a few years for researches to be published. This creates situation where academic literature about search engine optimization is behind the current SEO practices, and research gaps can be identified. Earlier literature does not have articles addressing the importance of written content in search engine optimization. This is a substantial lack in academic literature because the latest articles and white papers from the companies practicing search engine optimization are highlighting importance of content in search engine optimization.

Current articles from search engine practitioners and Google are indicating that search engine rankings can be improved by producing quality content to the websites (MattCutts/Content, 2014). For example, quality content can be a blog article that provides useful information (Hipwell & Reeves, 2013). However, there cannot be found many academic articles studying how content is improving search engine rankings. Motivation for this thesis is to acquire knowledge from this area: how content can be used to improve search engine rankings. This knowledge is valuable for people who are implementing marketing operations.

Content-centered is important term to understand. It simply means that content of a website is used to improve search engine rankings. Content can be a written text on a web page but it can be much more, for example videos, images, eBooks, white papers and blog posts (Murthy, 2011). In the case of search engine optimization, written content is in the center because without having the possibility to include the relevant keywords within content, its optimization value is greatly decreased (Cui & Hu, 2011).

Research questions in this thesis are related to studying the connection between search engine optimization and content marketing. Last two research questions are studying the specific search engine optimization tactics. These tactics are content, keywords, and links. The following list presents research questions:

- What is the intersection of content marketing and search engine optimization?
- What is the intersection of content on a web page and keywords used on it?
- What is the intersection of content on a web page and links pointing towards it?

The diverse understanding of search engine optimization is achieved using different types of references. The majority of references are academic journals about search engine optimization. In addition, the knowledge from search engine optimizers is used to complement the academic research. Google offers information regularly concerning search engine optimization and how it should be properly executed. This information is used to get a new point of view to search engine optimization. Extra attention is paid towards reference criticism because some of references are from companies practicing search engine optimization.

Search engine optimization is also in the intersection of many academic sciences. Three academic sciences that are closely related to search engine optimization. These are psychology, computer science, and marketing. From the psychological perspective, the end-user behavior is an interesting topic, for example, why people are clicking certain search results (Dou, Lim, Su, Zhou, & Cui, 2010). Secondly, computer science is related to search engine optimization because technical changes in websites are affecting search engine results. Thirdly, marketing perspective is studying search engine optimization as a marketing channel (Chen, Shih, Chen, & Chen, 2011). Figure 3 illustrates this.
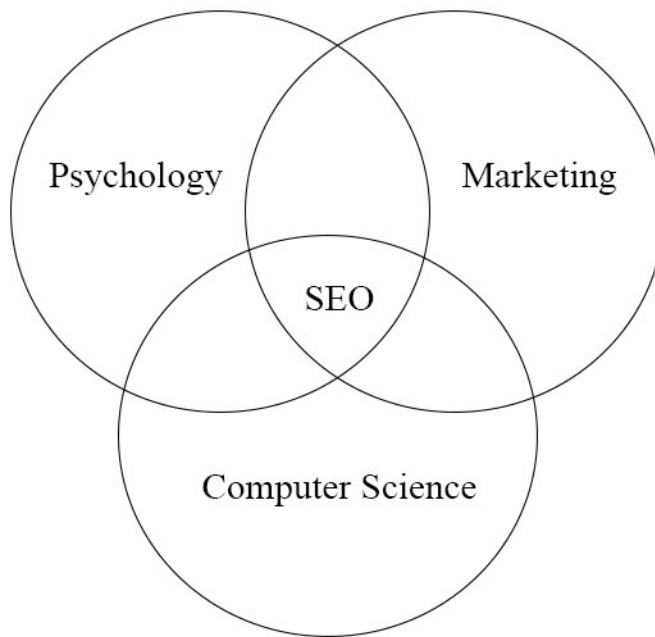
Figure 3 Position of search engine optimization in academic research

In this thesis, the focus is mainly on the marketing perspective. When search engine algorithms are discussed, it is related to field of computer science. Psychological perspective is not focused in this study.

1.3   Structure of the thesis

This thesis is divided into two parts. Chapters from 2 to 4, focus on constructing the content-centered method for search engine optimization. Chapters 5 and 6, focus on evaluating the constructed method in practice. This separation between constructing and evaluation comes from design science methodology that is used in this thesis (Hevner, March, Park, & Ram, 2004).

Search engine optimization literature is reviewed in Chapter 2, and content marketing literature is reviewed in Chapter 3. Chapter 4 contains empirical research. Two propositions are formed in order to test the content-centered method in practice. Methodology, data collection, and analysis are also presented in Chapter 4.

Chapter 5 contains results for two propositions. Conclusions are presented in Chapter 6. Summary and abstract are giving an overview of this thesis. Introduction contains key concepts and research questions.

2 SEARCH ENGINE OPTIMIZATION

2.1 Search engine optimization in a nutshell

The search engine results are divided into two categories that are organic results and pay-per-click ads. Figure 4 illustrates this. In paid results, companies can bid for relevant keywords to obtain visibility on the search engines. In contrast, organic results are shown on the basis of search engine algorithm. Even though organic search results are considered to be unbiased, they can be improved with search engine optimization. In short, search engine optimization is a practice to improve organic search engine results (Malaga, 2007).
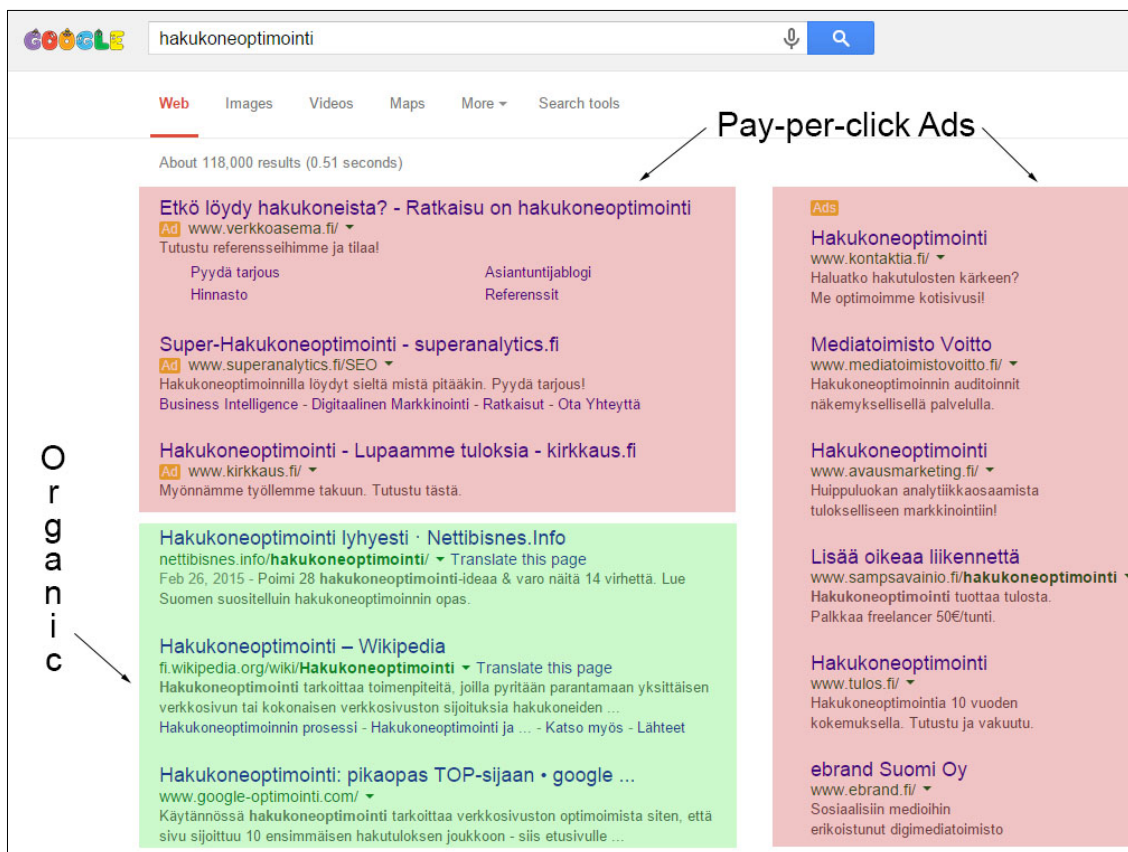
Figure 4 Organic result and pay-per-click ads on Google
(GoogleSearch/hakukoneoptimointi, 2015)

Google has its own guidelines for search engine optimization, and recommends companies to follow these guidelines (Google/SEOguide, 2010). Some of these guidelines are discussed in this thesis, for example usage of keywords. These guidelines are important because some SEO methods can even decrease rankings or their usage is penalized by getting banned from the search engines (HundredRubys/SEOpenalty, 2015).

Methods that can get you banned by Google are called black hat methods. In contrast, methods that are recommended by the search engines are called white hat methods. Unfortunately, the line between white hat methods and black hat methods is unclear because the search engines are not defining it transparently (Malaga, 2008). It is a good practice to be familiar with common black hat methods so it is possible to avoid using them. Here is a list of them (Malaga, 2008):

- cloaking,
- doorway pages,
- invisible content,
- link farms.

Cloaking means showing a different content to search engines and visitors (Zuze & Weideman, 2013). Reason for using cloaking is to have content, which is perfectly optimized for both audiences. Doorway pages are optimized for single keywords, and they contain a link to the main site. Users can click on a doorway page link on a search engine results and land to the single page with a link to the actual website. To conclude, a normal landing page is part of the website when a doorway page is a separate page created only for optimization purposes. Invisible content can be hidden on a website, for example, hundreds of keywords on the white background with white font color. From the link farms, links can be bought and that is not allowed by Google (Malaga, 2008). Best practice is to avoid black hat methods because Google has an advanced algorithm for detecting the unusual behavior (Moz/GoogleAlgorithm, 2015).

In search engine optimization, the basic elements on a website are modified in order to improve search rankings. These elements are title tags, navigation, images, headlines, content, domain, and URL (Google/SEOguide, 2010). In addition, some other optimization methods are not done on the website. These are called off-page optimization methods, which are including acquiring links from other sites and social signals such as posts, comments, and likes within social media sites (Baye et al., 2014).

The third aspect to search engine optimization is a technical point of view. Technical optimization includes indexing, site speed, structural data, and changing meta description tags (Tober et al., 2014). Overall, search engine optimization methods can be categorized into these three areas:

- on-page optimization,
- off-page optimization,
- technical optimization.

Similar categorizing can be found from the search engine optimization literature (Malaga, 2008). The on-page optimization methods are carried out on a web page, and changes can be seen on a web page, for example, changes in texts can be notified immediately. The off-page optimization methods are carried out on the other websites. These are affecting the search rankings but are not visible on the optimized site. The

technical optimization is executed on the background of a website. Technical changes are not directly shown on a web page but can affect, for example, on loading times. In addition, some optimization methods can have visual impact on the search engine result page. For example, product reviews can be shown in the search results.

2.2   Academic research on search engine optimization

Literature was mainly obtained from the well-known databases such as ABI/INFORM Global, Business Source Complete, ScienceDirect, and Google Scholar. The literature review was initiated using common expressions related to search engine optimization, for example, "search engine optimization methods", "search engine marketing", and "the algorithm of Google". After this, a snowball sampling was used to identify new articles on the basis of already found articles. Table 1 summarizes key articles used in this chapter. A good overview about search engine optimization can be formed by reading these articles.

Table 1 Literature review on search engine optimization

Authors	Article Title	Method	Implications for Search engine optimization
Baye, De los Santos, & Wildenbeest (2014)	Search Engine Optimization: What Drives Organic Traffic to Retail Sites?	Empirical	Effect of brand equity in search engine optimization
Evans (2007)	Analyzing Google rankings through search engine optimization data	Empirical	Ranking factors
Malaga (2007)	The Value of Search Engine Optimization: An Action Research Project at a New E-commerce Site	Empirical	Search engine optimization methods: indexing, tags and keywords
Malaga (2008)	Worst Practices in Search Engine Optimization	Theoretical	The black hat methods
Shih, Chen, & Chen (2012)	An Empirical Study of an Internet Marketing Strategy for Search Engine Optimization	Empirical	Search engine optimization methods
Zhang & Dimitroff (2005)	The Impact of metadata implementation on webpage visibility in search engine results (Part II)	Empirical	Using metadata to improve the search engine rankings
Zuze & Weideman (2013)	Keyword stuffing and the big three search engines	Empirical	The keyword stuffing and the indexing times for the search engines

The articles in Table 1 give an overview of search engine optimization. These articles are important references because they offer empirical evidence about search engine optimization methods.

2.3   Keyword research

Search engines are working on keyword basis, which means that one can type any word on search engine and the search engine shows results based on this search term. Search engine optimization projects are started with the keyword research that includes choosing the relevant terms and phrases for the optimizing process (Malaga, 2008). Selected keyword can be any search term that is relevant for business. After choosing these keywords, search engine rankings of selected keywords are improved by using search engine optimization methods.

The keyword research is an important step because it forms a basis for the entire SEO project. Keywords are important in the every on-page optimization method, and they have also importance on the off-page optimization (Tober et al., 2014). Keywords should be concise and accurate because too long and broad terms tend to provide inaccurate search results (Baye et al., 2014). According to Cui and Hu (2011) the following aspects have to be taken into consideration:

- keywords must to be related to content of a website,
- choose popular keywords that have high number of searches,
- take advance of tools when selecting keywords.

Keywords should be related to content of the website (Malaga 2007). For example, it is hard to optimize website of grocery store to rank with holiday keywords. The brand keywords provide automatically a link between keyword and a website along with the following benefits: 1) they tend to provide a better *click-through rate (CTR)* and 2) improvements on the brand keywords will have positive impact to all other search queries related to the website as well (Baye et al., 2014).

Malaga (2008) suggests that in the case of popular keywords certain factors should be considered. He describes that ratio between popularity and competition has to be analyzed. Popular keywords tend to have high competition that makes them an uneasy target for search engine optimization. However, these keywords drive much traffic to websites. Google Adwords, Google Alerts, and Rank Checker are useful tools for analyzing keywords.

The keyword density is an important factor that has to be taken into account. It means the percentage of keywords divided with the total numbers of words on a web page. The high keyword density is important but an excessive use of keywords can decrease usability of a website and have a negative impact on the search results (Zuze & Weideman, 2013). Malaga (2007) suggests that optimal keyword density is from 1.2% to 1.6%. In contrast, Zuze and Weideman (2013) propose that keyword density should be over 3%. They further say that the search engines have not defined a desirable keyword density but the excessive use of keywords is a bad practice. This sets challenges for search engine optimizers because they have to balance between a proper keyword density and too high keyword density.

2.4   On-page optimization

Several on-page optimization methods are presented in this chapter. This list of on-page optimization methods is not complete but it contains some much researched topics. Figure 5 illustrates the parts of a web page that can be affected with on-page optimization methods.
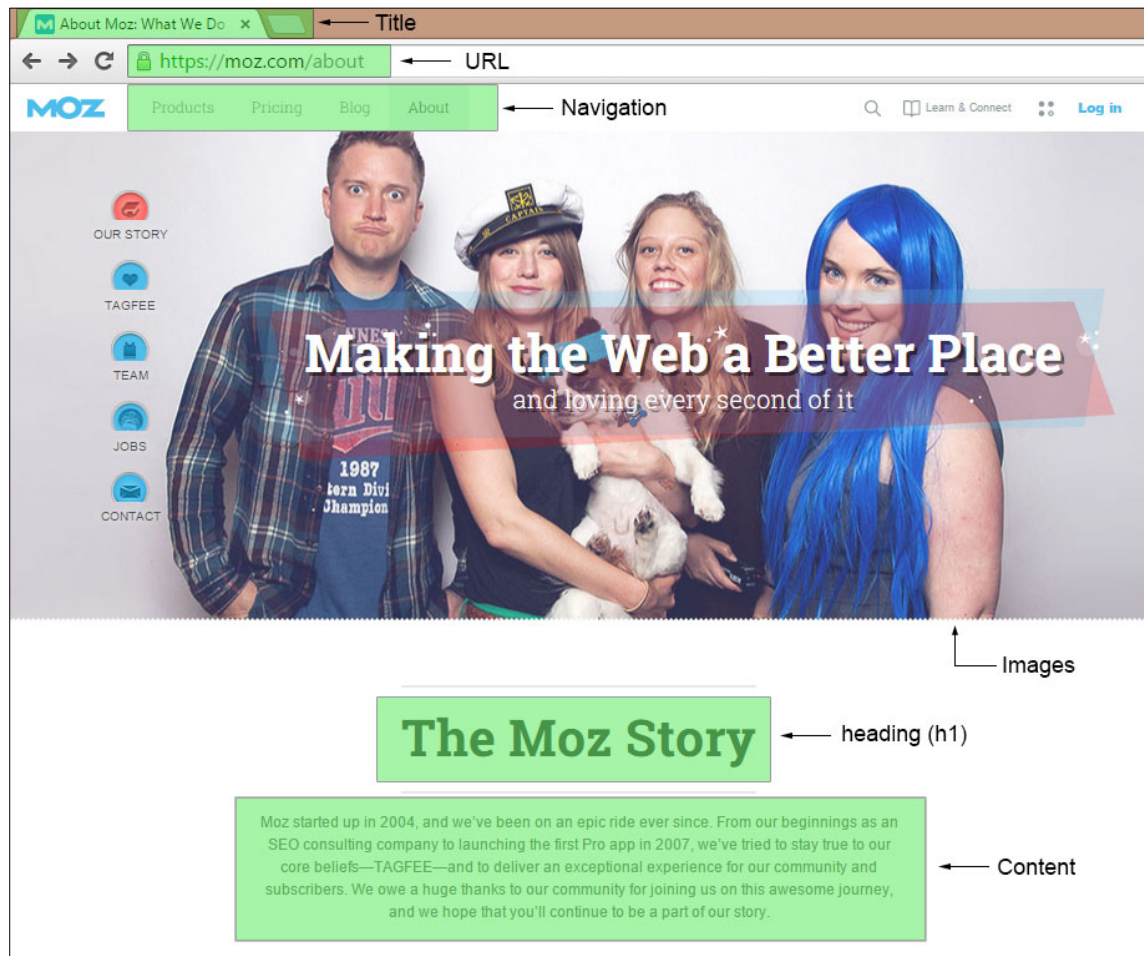
Figure 5 Elements of the website (Moz.com/about, 2015)

Changing titles is one way to improve search engine rankings. This usually requires a technical knowledge but the current *content management systems (CMS)* are offering easy ways for changing titles. For that reason, optimizing page titles does not offer that much of an advantage compared to competitors (Baye et al., 2014). The purpose of page title is to describe content of a web page. The page title containing the keyword is a good practice (Cui & Hu, 2011) but keyword stuffing should be avoided (Google/SEOguide, 2010). The page title should be brief and accurate description of a web page, and too long and uncertain page titles should be avoided (Malaga, 2007). In addition, every web page should have a unique page title so Google can identify pages better (Google/SEOguide, 2010).

Domain should contain important keywords but correlation between a business model and a domain is more important, for example, domain could be the name of company (Frydenberg & Miko, 2011). When including keywords to a domain it is important to avoid keyword stuffing, and keywords also need to be closely related to content of the website (Blogspot/Keywords, 2014). In addition, URL should be simple to understand so that it conveys information to visitors (Google/SEOguide, 2010).

Navigation of a website serves two audiences: 1. visitors 2. search engines (Cui & Hu, 2011). For visitors, the main goal for navigation is to find an useful information (Zhang & Dimitroff, 2005). For the search engines, navigation is a way to make indexing of a website as easy as possible (SearchEngineJournal/Navigation, 2012). Building a search engine friendly navigation is a technical operation, and Google is offering guidelines for that (Google/SEOguide, 2010).

The optimization of images is a straightforward procedure. There are two factors that need to be taken into consideration: 1) filename and 2) *alternative tag* (*ALT tag*) (MadLemmings/ImageSEO, 2013). Purpose of the ALT tag is to describe content of the image to the search engine. Brief and descriptive filenames and ALT tags should be used to boost SEO visibility of a website (Google/SEOguide, 2010). With these tactics, the visibility in the Google image search can be increased.

The heading one (H1) is the main heading of a web page. It is another factor affecting to search engine rankings (Subramanian & Malaga, 2011). Current surveys indicates that the H1 is a relevant ranking factor (Tober et al., 2014). Still, opposite point of views occurs, which claims that the H1 does not have a direct impact on the search results (Moz/SEOmistakes, 2010). However, more proof can be found about the H1 being a ranking factor.

The importance of content has been realized some time ago (Zhang & Dimitroff, 2005), and its importance has increased steadily. Production of content should be regular, and several channels should be used for sharing it (Halligan & Shah, 2009). Providing quality content, such as articles, should be part of a SEO strategy (Baye et al., 2014). Content will stay on the web after it has been published and it remains in the memory of a search engine, attracting visitors a long time after publishing.

The on-page optimization methods have also impact on the visual aspect of the search engine results page. Figure 6 illustrates this.
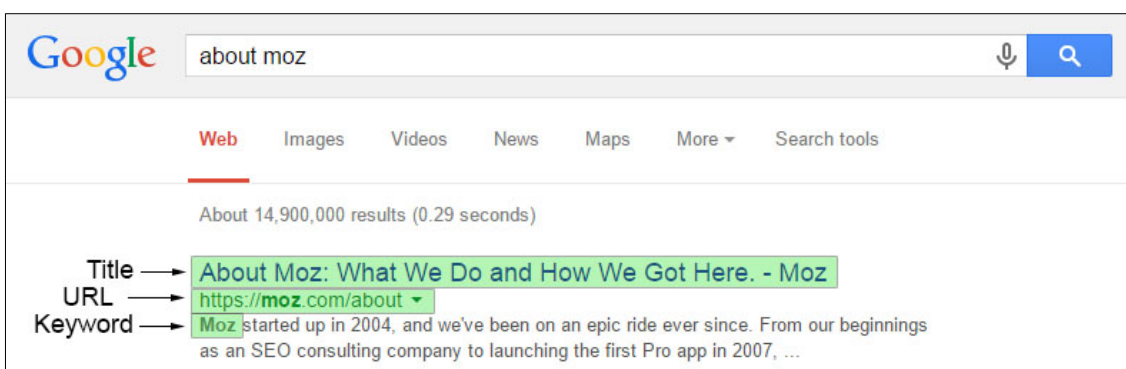

Figure 6 Results of the on-page optimization (GoogleSearch/AboutMOZ, 2015)

The page title will be usually displayed as a title for the search result (Google/SEOguide, 2010). In some cases, Google might decide that the page title is not

relevant enough. In these cases, it might replace the title and use some other texts. URL is shown in the same format as can be seen in the website. In addition, the keywords are bolded in search results. By bolding the keywords, relevancy of a web page is pointed out to users (Google/SEOguide, 2010).

These visual changes on the search engine result page are affecting to click-through rates (SearchEngineLand/CTR, 2014). The click-through rate is the percentage of people who have clicked your link compared to all people who have seen your link. It is recommended to pay attention to click-through rates, when executing search engine optimization. It is studied that high search engine rankings will automatically lead to good click-through rates (Chitika/GoogleTraffic, 2013). However, click-through rates can be improved with focusing the visual aspect of the search results.

2.5   Off-page optimization

Links have been an important factor affecting search results since the release of Google. The algorithm of Google is based on the links (Brin & Page, 1998). When Google was published, Brin & Page (1998) announced a pattern how Google presents the search results based on the links between websites. They presented PageRank that calculates an importance of web page based on the number of links pointing to it and quality of these links. There have been discussions that links are losing their importance as a factor affecting search rankings, but Google has cleared this matter lately. They announced links becoming less important over time but links have still many years left as an important ranking factor (SearchEngineLand/BacklinksImportance, 2014).

Acquiring high quality links is important, which means that the link is from a popular site (Frydenberg & Miko, 2011). A single link from the highly appreciated site, which has many incoming links by itself, can have a significant effect on the search rankings (Malaga, 2007). In addition, it is important to pay attention to the number of links because usually when the number of links decrease, rankings are also decreasing (Evans, 2007).

In the early years of search engines, links were misused constantly by using black hat methods such as link farms. From link farms people could buy links to increase their search rankings. Google has respond to different misbehaviors by adjusting its algorithm to penalize unwanted behavior (Moz/GoogleAlgorithm, 2015). Still, common reasons for getting penalized by search engines are relating to the misusing of links (HundredRubys/SEOpenalty, 2015).

Link building without using any suspicious methods demands creativity. Here are some ideas to build links in a proper way that does not violate the guidelines of Google (SearchEnginePeople/LinkBuilding, 2014):

- brand mentions,
- broken link building,
- local directories.

Brand mentions means finding websites, which have mentioned your website, but have not linked back to your site (SearchEnginePeople/LinkBuilding, 2014). This can be done by writing the following code to Google Search and replacing information with yours: intext:brand name -site:yoursite.com. After that, a link request email can be send to the webmasters of suitable websites.

Broken link building means finding websites that contain links that are not working anymore. These sites should be related to the same business area as your website. After forming a list of these, an email can be sent to the webmasters about replacing dead links with yours.

In 2014, Google rolled out the Pigeon update that increased importance of local directories and Google Maps (SearchEngineLand/Pigeon, 2015). A good practice is to get your link to the directories such as Yelp, and use Google My Business page to optimize your Google Maps listing.

When acquiring links, anchor texts must be focused on (Baye et al., 2014). An anchor text is clickable part of a link. It is an important ranking factor because Google uses anchor texts to define subject to which the website is related to (Brin & Page, 1998). For example, if the keywords are found on the anchor texts, the ranking of the site can improve on the search engine results with these keywords.

The World Wide Web has changed, and social media has achieved huge popularity. Google has reacted to this and recent studies represent that social signals have become a ranking factor (Tober et al., 2014). Social signals mean comments, likes, and shares that people do in social media sites. According to Tober et al. (2014) Google Plus, Facebook, Twitter, and Pinterest are important social media websites. In addition, other researchers are also noticing the role of social sites such as Facebook and Twitter in search engine optimization (Frydenberg & Miko, 2011). Still, Google has said that social signals are not affecting to search engine rankings but these are handled like normal websites (SearchEngineWatch/SocialSignals, 2014).

However, Google is working closely with social media sites, for example, it has come to an agreement with Twitter to show tweets in Google Search (SearchEngineLand/Twitter, 2015). Although we cannot be sure if the social signals are a ranking factor or not, but it is certain that they bring traffic to websites. Due to that, social signals need to be taken into account in the online business.

2.6 Technical optimization

Search engines are storing all their search results in databases. These databases containing this information is called the index (TechRepublic/GoogleIndexing, 2013). A natural way to a new site to be included to the index is to wait for search engines to find this new site. This can be speeded up by using functions that search engines are offering. The major search engines are offering an opportunity to notify them about new websites and web pages but this process can be slow (Malaga, 2007). Questionable means, such as using keyword stuffing, should not be used to getting indexed by search engines even though getting to be indexed is crucial.

In order to increase traffic of a website, it is important to be found by the search engines. Indexing time may vary and there is no certainty that search engines are indexing every page they find (Malaga, 2007). However, some sites are not indexed at all (Zhang & Dimitroff, 2005). According to the research by Malaga (2007) it took three days for Yahoo to start indexing the researched site, for Bing it took eight days, and for Google it took suspicious long time to start indexing because the website was not indexed by Google during the four-month-long research. Reason for this might be the black hat method that the company had used in the past. Zuze and Weideman (2013) have found similar results and are suggesting that it will take from 5 to 33 days for search engines to find and index new web pages.

Some practitioners suggest that a number of web pages have a positive impact to search engine results (Halligan & Shah, 2009). This means that search engines are favoring large sites with thousands of pages. This sets challenges for smaller and less popular sites (Killoran, 2009). Still, contradictory opinions can be found. Some researchers suggest that a number of indexed web pages is not affecting search engine rankings (Evans, 2007). However, it is important to focus on indexing because without getting a website indexed it rarely achieve its goals (Killoran, 2009). The following are good practices to get pages indexed:
- submit XML sitemap,
- link from a popular site,
- on-site optimization.

Submitting an XML sitemap to the search engines is a good way to help search engines to index web pages faster (Frydenberg & Miko, 2011). In practice, this means submitting a list to Google Webmaster Tools, which contains all pages you want to be indexed (Sitemap.org, 2008). Another way to speed up indexing is to acquire a link from the popular website, and through this link search engines can find your website (Malaga, 2007).

After indexing, the meta description tag is an important factor that should be paid attention. Meta description tag is part of HTML code that can be edited usually through a

content management system. Changes made to the meta description tag do not have visual impact on the website but it affects visuals of Google Search. Figure 7 illustrates this impact of this tag.
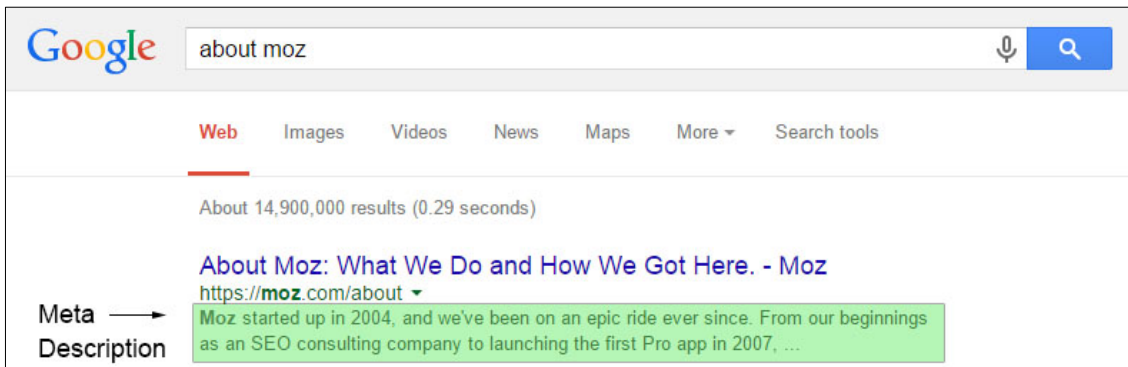
Figure 7 Results of the meta description tag (GoogleSearch/AboutMOZ, 2015)

Purpose of the meta description tag is to define content of the page for visitor, but Google can decide to use other introduction text if the meta description is not relevant (Google/SEOguide, 2010). The meta description tag does not affect directly to the search rankings, but it can improve click-through rates in a similar way than changes in the title or in the URL (SearchEngineLand/CTR, 2014). In addition, bolded keywords are a good element to draw attention. Meta description should be short and relevant (Garais, 2014). In addition to the meta description, Google offers other options to affect visuals of the search engine result page. Figure 8 illustrates these options.
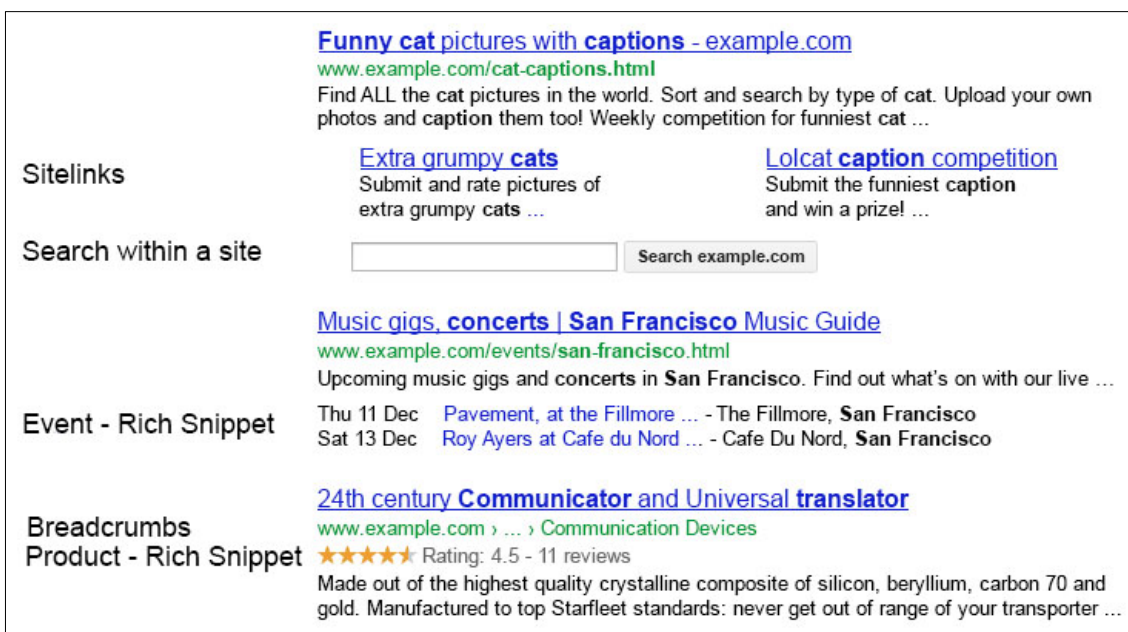
Figure 8 Elements of Google Search (GoogleWebmasterTools/Search, 2015)

Search engines are leaving behind the concept in which they offered only 10 links without any further information. Nowadays, they are offering more information in connection with the links (Crane, 2011). As can be seen from Figure 8, sitelinks are example of additional information that Google can show on search results. Sitelinks are generated by Google, and they are usually showed in connection with the popular sites (Google/Sitelinks, 2015).

Search within a site, breadcrumbs, and rich snippets are ways to make your search results more personal as can be seen from Figure 8. They can be activated by using the structural data (GoogleWebmasterTools/Search, 2015). Using structural data means highlighting data from your website in order to enable Google to show that highlighted data in the search results. Schema.org is a framework supported by the search engines and it is used in this process (Notess, 2012). The structural data can be also activated by using Data Highlighter by Google that is a less technical way (GoogleWebmasterTools/Search, 2015).

Site speed is an important part of search engine optimization because Google has said it to be one aspect affecting search engine rankings (Google/SiteSpeed, 2010). However, some studies are not showing any correlating between site speed and search rankings (Moz/SiteSpeed, 2013). This can be due to the high number of ranking factors (Evans, 2007) because each factor that is affecting search rankings has only a minor impact. However, site speed is still important factor because it affects user experience. Studies represent that slow pages can significantly decrease sales (iCrossing/Research, 2012).

3   CONTENT MARKETING

3.1   Content marketing in a nutshell

Content marketing is positioned under online marketing such as search engine optimiza-tion. Traditionally, content marketing has been seen as a different branch inside online marketing than as a part of search engine optimization. However, the Google algorithm update called Panda has increased the usage of written content also in search engine optimization (MarketingLand/Panda, 2014). This has brought content marketing and search engine optimization closer to each other. Figure 9 illustrates traditional position-ing between content marketing and search engine optimization.
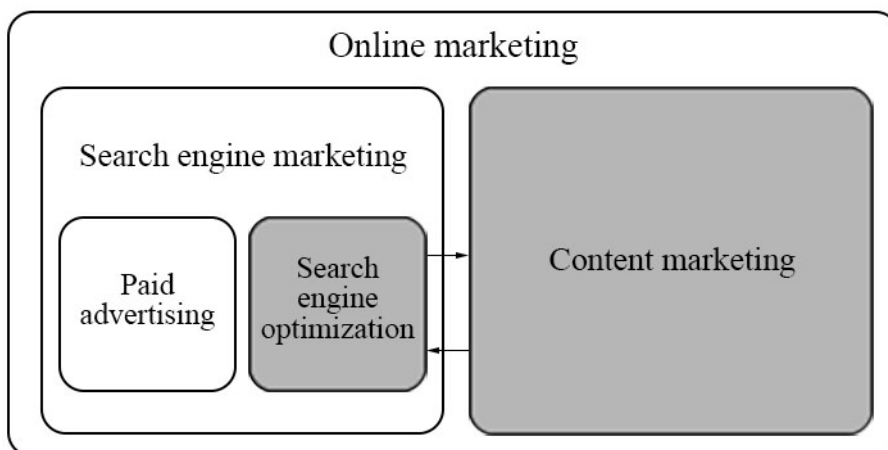
Figure 9 Position of content marketing

According to one definition, "content marketing is the creation of valuable, relevant and compelling content *by the brand itself* on a consistent basis, used to generate a posi-tive behavior from a customer or prospect of the brand" (Pulizzi, 2012). This definition encourages companies to create content about them. It is a good way to improve brand awareness but sometimes it can be challenging to create valuable and compelling con-tent about your brand. Idea of content marketing can be scaled from brands to products and services, because content can be created related to almost anything.

One way to create interesting content is to achieve a status of *though leadership* (Murthy, 2011). This means to become an author in some area of expertise that is relat-ed to the business. To became a real author, it is important to start think people as audi-ences, not as customers (Hipwell & Reeves, 2013). This means offering information instead of a sale pitch.

Traditionally, content marketing has been about creating interesting content and search engine optimization has been a technical practice. Nowadays, same practices can be used in both areas. Recently published content quality factors by Google are including points that could have been written for journalists. These factors are focusing on how to write high quality articles to the website (Google/HighQuality, 2011). Due to that, it could be relevant to hire a journalist in your online marketing team, whenever the need is for content marketing or search engine optimization (Halligan & Shah, 2009). If journalists produce content, search engine optimizers can focus solely to optimize it for search engines.

There are different content types that can be used to perform a content strategy (Jamehshooran, Danesh, Teimouri, & Heydari, 2011). Blogs are a popular channel for distributing content, but besides blog articles, many other content types can be used as well (ContentMarketingInstitute/Research, 2013):

- social media posts,
- blog articles,
- eNewsletter,
- case studies,
- white papers,
- videos.

According to a recent study, content marketers are using multiple channels simultaneously to distribute different content types (ContentMarketingInstitute/Research, 2013), for example social media posts can be used for advertising blog posts. Furthermore, the study describes that the use of social media has increased substantially, and marketers are considering it to be an effective marketing channel. Social media is always on. People are checking it frequently, and that makes it a promising channel for marketing (Hipwell & Reeves, 2013). Social media offers possibilities to deliver the message of your company regardless of time and place.

Usually entertaining or useful content is a good way for drawing interest of a reader (Hipwell & Reeves, 2013). If content does not get attention of users, full potential of it cannot be achieved. Google is offering guidelines for producing high quality content that gets attention of users. In this listing, articles are a key element for providing quality content (Google/HighQuality, 2011):

- a site is an authority of topic it writes,
- articles have original content,
- articles are long and informative,
- articles are interesting for readers.

Being an authority means that the website has gained reputation on a subject, which it is writing. Articles can be made interesting by having original content, for example,

conducting experiments and reporting results. In addition, informative articles can offer useful knowledge and get attention of users.

Engagement metrics, such as how long a reader stays on a site, are important when measuring a content strategy. People are spending more time reading interesting articles compared if they would be unhappy with an article and bounce away from that site just after they had landed there. Google is appreciating high quality content that is engaging people to spend time with it (Google/Philosophy, 2015). In addition, time on site and bounce rate are affecting positively to search engine rankings (Tober et al., 2014).

Content marketing has established its position in online marketing (Murthy, 2011). There are best practices that are preferable to be followed. Here is a list of practices for executing a content strategy (Hipwell & Reeves, 2013):

- have a clear core message,
- use visuals,
- tell a story,
- schedule content.

Audiences need a clear message. The internet is full of content and new articles are published constantly. Companies can stand out with the clear message, for example, presenting themselves as a valuable channel for obtaining information about developing the online business. When defining the core message, the search engine optimization value can be evaluated. The core message can be related to the popular keywords that can be used when writing articles (Cui & Hu, 2011).

Visuals can make a difference between content of two individual companies. Content with images attracts visitors, and people are spending more time with visualized content than content without visuals (ContentMarketingInstitute/Visuals, 2012). The old saying that a picture is worth a thousand words is suitable.

Usually online advertising has character limitations when writing ads. Content marketing enables telling a longer and more engaging story than traditional online advertising. Therefore, content should be interested to keep visitors on a site for a long time (Hipwell & Reeves, 2013). Finally, scheduling the content can increase its visibility because people are following different social medias at different times (Huffingtonpost/Timing, 2014). By scheduling your content, it can be published at times your audience ought to be online.

3.2   Academic research on content marketing

Content marketing literature was mainly obtained from the well-known databases such as ABI/INFORM Global, Business Source Complete, ScienceDirect, and Google Scholar. The literature review was initiated using common expressions related to content

marketing and search engines, for example, "content marketing", "Google Search and content marketing", and "content in search engine optimization". Articles about Google Search are included to give insight why content marketing is important also in search engine optimization. After this, a snowball sampling was used to identify new articles on the basis of already found articles. Table 2 summarizes key articles used in this chapter. A good overview about content marketing can be formed by reading these articles.

Table 2 Literature review on content marketing

Authors	Article Title	Method	Implications for search engine optimization
Brin & Page (1998)	The anatomy of a large-scale hypertextual Web search engine	Empirical	Google search engine
Crane (2011)	Search Neutrality as an Antitrust Principle	Theoretical	Semantic search
Hazan (2013)	Stop Being Evil: A Proposal for Unbiased Google Search	Theoretical	Unbiased search engines
Hipwell & Reeves (2013)	How to use content to grip your audience like a broadcaster	Theoretical	Content marketing
Killoran (2009)	Targeting an audience of robots: Search engines and the marketing of technical communication business websites	Empirical	Google search engine
Murthy (2011)	Content Marketing	Theoretical	Content marketing
Pulizzi (2012)	The Rise of Storytelling as the New Marketing	Theoretical	Content marketing
Xing & Zhangxi (2006)	The impact of search engine optimization on online advertising market	Empirical	Search engine algorithms

Articles are divided into two categories: content marketing articles and articles related to search engines. Search engine articles are mainly about Google Search and its functions. Search engines are reviewed under content marketing because recent algorithm updates have moved search engines towards content marketing. Content has become an important factor for determining which sites acquires high positions in search results (Shih et al., 2013).

3.3 Importance of content for Google's algorithm

This thesis does not intent to study content marketing only by itself. The purpose is to utilize theory from content marketing to form an understanding about how content can be used to improve search engine rankings. For that, it is crucial to be familiar with Google. Google is a hard subject to research because it is not revealing its search algorithm (Xing & Lin, 2006), but some literature can be found about this subject.

Basic principle is that search engines are indexing new pages and updating the old ones by following links (Malaga, 2008). Search engines are comparing keywords to the pages found already from the index, and showing search results based on that comparison (Kritzinger & Weideman, 2013). One of the reasons why Google dominates the search engine market can be found from its early years. Google Search has been build to scale easily and remain fast regardless of growing number of web pages (Brin & Page, 1998).

Google is using over 200 factors to determine which search results are relevant (Moz/RankingFactors, 2014). No official information is published about these 200 factors (Killoran, 2009). There are only speculations about weightings of each factor (Evans, 2007). Due to high number of ranking factors, a single factor, such as keywords density, might not have a significant impact on the search results (Brin & Page, 1998). Every aspect of a website needs to be optimized.

Links have been an important factor affecting search engine rankings since the release of Google (Brin & Page, 1998). Brin and Page (1998) have reported that PageRank is taking into account links pointing towards a website, called external links. Internal links are also a ranking factor but their effect are considered to be less important compared to external links (Malaga, 2007). Recent studies are supporting that both internal and external links should be taken into account when optimizing a site (Tober et al., 2014).

It has been studied that regularly updated pages are favored by PageRank (Baeza-Yates, Castillo, & Saint-Jean, 2004). These fresh pages have a chance to rank higher than pages that have not been refreshed for a while (Moz/Content, 2011). Updating pages regularly seems to be the best practice, and updating content of a page is a logical way of executing this.

Users believe that organic search results are unbiased and results cannot be affected with marketing (Xing & Lin, 2006). However, the organic results can be affected with search engine optimization and Google is aware of this. One reason for constantly updating its search algorithm is to lessen effect of search engine optimization (Xing & Lin, 2006). Secondly, the organic search results can be manipulated by Google, for example, it has improved visibility of its own products such as Google Maps (Crane, 2011). With

this manipulation of search results, Google has overcome its competitors in search results (Hazan, 2013).

It can be said that search engine optimization started in year 2000 when Google published the toolbar algorithm update, which made PageRank changes visible to webmasters (Google/PageRank, 2000). In the early 2000s, algorithm updates were focusing to eliminate black hat methods such as usage of link farms and keyword stuffing (SearchEngineJournal/Algorithm, 2004).

The semantic search has been other major area that Google has focused. The semantic search means that Google is offering information on the search engine results page, and user do not need to click away from the search page to have further information (Crane, 2011). Three examples about semantics search are presented in this thesis: 1) Google Knowledge Graph, 2) news, and 3) real-time social media posts.

Companies can affect what Google is showing in the Knowledge Graph by using structural data, which is described more detailed in Chapter 2 (Google/KnowledgeGraph, 2015). In addition, Google is showing real-time results such as news and social media posts (Google/RealTime, 2009). As can been seen from Figure 10, Google Search has changed much from the days it offered only a list of ten blue links.
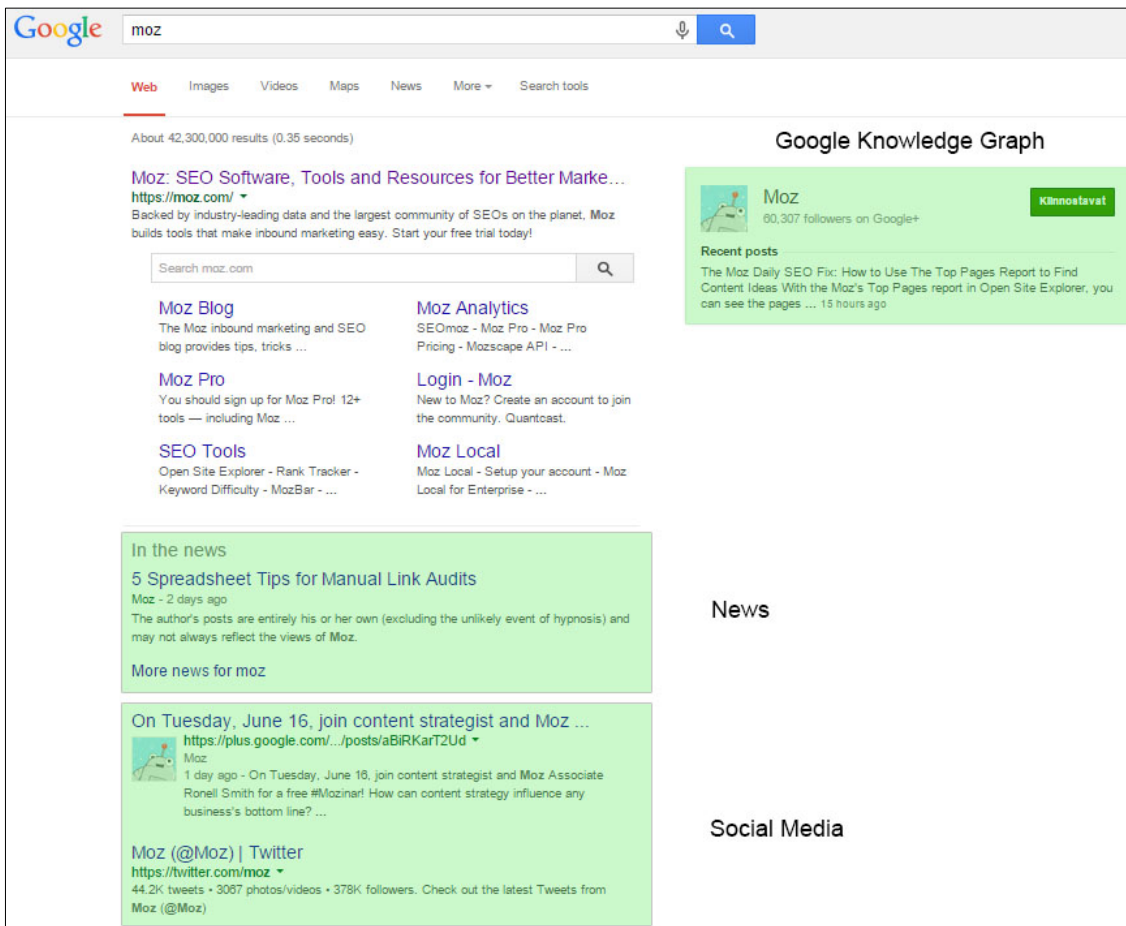
Figure 10 Google semantic search (GoogleSearch/Moz, 2015)

Importance of quality content is also one major area that has been affected with algorithm changes. The algorithm update called Panda is meant to improve position of sites that are containing high quality content (MarketingLand/Panda, 2014). According to Google, high quality content can be, for example, original articles that are offering value for visitor (Google/HighQuality, 2011). Algorithm of Google is deciding what articles are providing high value.

For search engine optimizer, it is important to follow recent Google updates because they are offering new guidelines. Lately, semantic search and quality content are two big trends to be noticed. While semantic search is offering possibilities to visualize search results and increase click-through rates, quality content is in the center when the focus is in improving rankings (Baye et al., 2014).

3.4   Synthesis: search engine optimization and content marketing

Search engine optimization, search engines, and content marketing are all closely related to each other. Search engine optimization and content marketing are affecting search

engine rankings. Changes in search engines are affecting how online marketing should be conducted. In addition, content marketing and search engine optimization have become closer to each other because content can be used to increase search engine rankings. Figure 11 illustrates this.
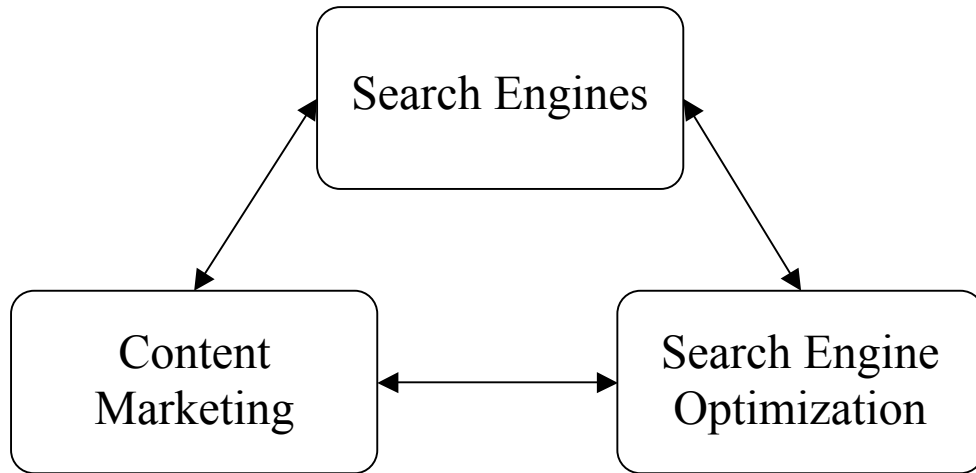
Figure 11 Connection between search engine, search engine optimization, and content marketing

These three areas are connected to each other. Focusing on all three fields is necessary in order to gain good search engine rankings. Table 3 illustrates why connections between these areas are important to notice.

Table 3 Synthesis: Search engines, search engine optimization, and content marketing

Subject	Search engine perspective	Search engine optimization perspective	Content marketing perspective
Keywords	Are used to show search results	Are used to boosts rankings of a site	Are placed within content
Content	Is used to evaluate quality of a site	Is used to increase quality of a site	Is used to retain visitors on a site
Images	Are shown in the image searches	Are optimized by using relevant ALT tags	Are used to visualize content such as articles
Social signals	Real-time comments are shown on search results	Are used to drive traffic to a site	Are used to distribute content
Indexing	Is used to include new pages to the index	Is used to increase number of pages indexed	Is used to create new pages, for example, blog posts
Links	Are used to evaluate relevance of a site	Are used to increase relevance of a site	Are used to show to readers a new content
Anchor texts	Are used to define to which topic a site can be related	Are used to increase relevance within relevant topics	Are used to tell what links are all about
Titles	Are shown in search results as an title	Are used to boosts rankings with certain keywords	Are used to describe content of the page
Main headings of a page (H1)	Are used to define to which topic a site can be related to.	Are used to boosts rankings with certain keywords	Are used as a headline for content
Meta descriptions	Are shown in search results to describe content of the site	Are used to increase click-through rates	Are used to describe content of the page

Keywords, content, and images are all closely related to each other. Google is using content as a ranking factor, and content marketers are producing content by taking into consideration search engine optimization, for example, using keywords. Social signals are used to get visibility to content by posting it social medias (Tober et al., 2014). When people like and share content, it attracts more attention.

Publishing blog posts are an usual way to implement content marketing (ContentMarketingInstitute/Research, 2013), but also a good way to create new pages that could be indexed by search engines. The more pages there are the more likely some of them will attract new visitors. Blog posts or articles are a preferable tactic to acquire links because people tend to share interesting articles with links (Halligan & Shah,

2009). Keywords are placed to anchor texts in order to increase search engine rankings (Brin & Page, 1998). However, keywords cannot be forced to be part of a text or an anchor text if they do not fit in the context. With interesting articles, people spend more time on site, and a possibility of somebody sharing your articles increases. If your articles get shared, you automatically get new links to your site pointing to that article.

Titles, H1s, and meta descriptions have been used in search engine optimization a long time (Google/SEOguide, 2010). Still, connection between these tactics and content marketing can be found. All of these are describing content of a page. According to Google, the purpose of the title is to summarize content of page in one sentence (Google/SEOguide, 2010). Google further describes that the purpose of the meta description is to offer additional information about content of the page. These are ways to express visitors that your search engine link is worth-to-click because they can be seen in the search engine result page.

Usually H1 can be a headline for a page or a blog post. Keywords can be used in title to boost ranking (Tober et al., 2014), but readability is a first priority. Overall, search engine marketing must be implemented in a way that user is in the center to achieve good results (Google/Philosophy, 2015).

4   METHOD OVERVIEW

4.1   Research methodology

The design science is a methodology used in this thesis. It is suitable for a research aiming to solve new problems or to improve effectiveness of solved problems (Hevner et al., 2004). In this thesis, the aim is to improve effectiveness of already solved problem that means executing more effective SEO campaigns.

Design science is useful for research areas that do not have a wide range of existing literature and research (Hevner et al., 2004). Creating innovative artifacts, models, and methods will provide possibilities to research these areas. Search engine optimization fits to this description because new SEO trends are emerging faster than scientific literature about them is published. Table 4 presents seven guidelines, which every design science project should contain.

Table 4 Design science research guidelines (Hevner et al., 2004)

Guideline	Description	In this thesis
Guideline 1: Design as an Artifact	Designing purposefully artifact for a special problem	A method for search engine optimization
Guideline 2: Problem Relevance	The problem should include revenue point of view and cost-effectiveness	Revenue point of SEO is discussed
Guideline 3: Design Evaluation	Evaluation can be executed in the real business environment	Material have been collected from the case company
Guideline 4: Research Contributions	A research should contribute for future academic research	In this thesis, the constructed method is the biggest contribution
Guideline 5: Research Rigor	Limitations and reliability must be addressed	These seven guidelines have been followed in order to be rigor
Guideline 6: Design as a Search Process	Means, ends, and laws should be noticed	These mean resources, goals, and environment
Guideline 7: Communication of Research	Conclusions must be presented for technological and managerial audiences	This has been done in the conclusions

The main idea in design science is to create an artifact that solves a specific problem or improves the effectiveness of current operations. According to the first guideline an artifact can be a construct, a model, a method or an instantiation. In this thesis, the method for search engine optimization is constructed.

The main idea in the second guideline is to define the relevant problem, and to reduce the gap between the current state and the desired outcome. Relevance is achieved when design science research addresses a problem that derives from a true business need (Cleven, Gubler, & Hüner, 2009). This thesis is closely related to a real business needs because a focus is on improving search engine results of real companies.

Guideline three, the evaluation, requires defining appropriate metrics that enable the mathematical analysis of the artifact. In evaluation phase, the data is collected from the case company and it is analyzed.

Guideline four states that a design science research must contribute knowledge to at least one of the following aspects. Firstly, a design science research can contribute knowledge in the form of design artifact. For example, this can mean that a design artifact can benefit companies to operate more efficient. Foundations are the second area where knowledge can be produced. This means generating knowledge that can be used to implementing future design science projects. Thirdly, new knowledge can be achieved how to evaluate design science research. Through these three areas a research must also have contribution to the business world. In this thesis, a constructed artifact is offering useful information for implementing search engine optimization projects in a real business environment.

Being rigorous, that is mentioned in the guideline five, has to occur through a design science research. Concretely, it means using appropriate mathematical metrics, constructing the artifact according to the guidelines, using comprehensive literature review, and using suitable methodologies in the evaluation phase. The point of being rigorous is to ensure that the constructed artifact provides useful information. In this thesis, these guidelines are followed, for example, the method has been constructed on the basis of earlier theory and various metrics are used in the evaluation.

Means, ends, and laws are mentioned in the guideline six. Means are resources that are used to build the artifacts, for example, own personal knowledge about a subject. Ends are goals for the project. Laws represent the environment that is uncontrollable, for example, search engine can change their search results without a warning.

The last guideline is related to communication. The artifact must be communicated to two audiences that are managers and implementers. It must be communicated in detail, which enables concrete use of the artifact. For managers, it must be communicated in a way that they can allocate organizational resources for constructing the artifact. This can be done by highlighting its relevance to business.

Variable	Value			
Approach	Qualitative		Quantitative	
Artifact Focus	Technical	Organizational		Strategic
Artifact Type	Construct	Model	Method	Instantiation	Theory
Epistemology	Positivism		Interpretivism	
Function	Knowledge function	Control function	Development function	Legitimization function
Method	Action research	Case study	Field experiment	Formal proofs
	Controlled experiment	Prototype		Survey
Object	Artifact		Artifact construction	
Ontology	Realism		Nominalism	
Perspective	Economic	Deployment	Engineering	Epistemological
Position	Externally		Internally	
Reference Point	Artifact against research gap	Artifact against real world		Research gap against real world
Time	Ex ante		Ex post	

Figure 12 The evaluation framework for design science research - chosen values are colored (Cleven et al., 2009)

Importance of the evaluation phase is often poorly performed even though its importance has been identified (Pries-Heje, Baskerville, & Venable, 2008). The evaluation phase means that testing a constructed method in a real business environment. In this thesis, attention is paid towards to the evaluation of the artifact with the evaluation framework presented in Figure 12. This figure has been configured for this thesis, and chosen values are colored. This evaluation framework consist of variables and values, and it is designed to be the general framework for the design science research evaluation (Cleven et al., 2009).

This research uses a naturalistic evaluation, which means exploring the method in a real business environment (Pries-Heje et al., 2008). For this reason, the evaluation is performed at the same time as it is implemented. In addition, this research reflects realism, and it takes environmental objects as given, for example, the search engines are functioning in a manner that is defined by them and search engine optimizers cannot change that.

This research focuses less on iterative construction of the method. There has been put more focus on constructing the method based on the earlier knowledge base. Due to this, legitimization of the artifact is important. This means that the method and its outputs should be well-documented, and method needs to be repeatable. The evaluation is executed internally, which means that the constructing and the evaluation of method are executed by the same person. This highlights importance of legitimization.

4.2   Propositions for testing the content-centered method

Theory from search engine optimization and content marketing are compiled to form the content-centered method for search engine optimization. Theory from content marketing is used to complement search engine optimization theory because recent studies have shown content to be useful when improving search rankings (Tober et al., 2014). This content-centered method consists of three SEO tactics: 1) content, 2) keywords, and 3) links.

Content as a ranking factor is a growing trend within search engine optimization (MattCutts/Content, 2014). Google has been rolling out algorithm update named Panda at regular intervals since 2011 (Moz/GoogleAlgorithm, 2015). Its purpose is to identify high quality content in reliable way (MarketingLand/Panda, 2014).

Having high quality content on a web page tends to increase search engine rankings of that page. Blog posts are an often used tactic in content marketing (Jamehshooran et al., 2011), and high quality content can be a blog article on a web page that offers useful information to visitors. In addition, written content enables the use of many other SEO methods such as placing keywords in content. On the basis of these observations from the literature review, the first version of the proposition 1 can be formed.

Written content on a web page is increasing its search engine rankings.

Search engines are functioning on a keyword basis (Brin & Page, 1998). This means showing websites in the search results that are matching for keywords, for example, search terms can be found on the website. In addition, it is logical to use keywords on written content because it is all about words. Based on these observations, the second version of the proposition 1 can be formed.

Search engine rankings are improving with keywords that have been focused when writing content.

When content as a ranking factor represents the newest trends, links are a traditional search engine optimization method that has been used since Google was founded (Brin & Page, 1998). Links are indicating to Google that specific websites has relevant content because people think it is worth linking for (Google/Philosophy, 2015). Links are informing Google that newly produced content has value to the visitors. The final version of proposition 1 unites content, keywords, and links. It is tested in the real business environment.

p1: Keyword-rich written content attracting links is improving search engine rankings of the page.

With this proposition, the collaborative effect of content, keywords, and links is examined in improving search engine rankings. Individual impact of these factors is not studied.

The proposition 1 assumes that search engine rankings are improving only with keywords that are found on content. However, earlier SEO research suggests that improvements in specific keywords could have

positive impacts on all search queries related to the website (Baye et al., 2014). The second proposition suggests search engine optimization is affecting positively to all keywords not only those that have been focused during the optimization process.

p2: Keyword-rich written content attracting links is improving search engine rankings of the whole website.

When conducting search engine optimization, individual pages and keywords are optimized. The second proposition is testing whether optimization actions affect positively to rankings of other web pages within the same domain.

4.3   Data collection and analysis

The content-centered method for search engine optimization was tested in a real business environment from October 2013 to December 2013. After that time period, results were still monitored until March 2014 because it might take some time for SEO results to take an effect. There can be delay between executed SEO actions and results as it might take time for search engines to register these changes (Zuze & Weideman, 2013). During that project time, all actions were manually documented (see appendix 1).

Progress was monitored with two different manners: 1) manually through Google and 2) with on-site analytics. These different manners were used to achieve objective results. Search engine rankings of chosen keywords were checked manually using Google Search. Three different browsers were used to minimize variation in search results. These browsers were Google Chrome, Mozilla Firefox, and Internet Explorer 9. In-build functions of these browsers, such as InPrivate mode in Internet Explorer, were used to hide search history that can affect rankings. Google can show more often sites to people that they used to visit regularly.

Keyword rankings were also recorded by using proxy servers to hide geographical location because search results can differ between geographical locations

(MarketingSherpa/GEO-targeting, 2012). To conclude, multiple browsers were used, search history and geographical location were hidden, to ensure reliability of the results. Search engine rankings presented in results are average values from different browsers.

Google Analytics and Google Webmaster Tools were on-site analytic software used. They were already installed on the website of ElämysLahjat.fi, and they are popular software in ecommerce (Nakatani & Ta-Tao, 2011). Analytical queries were downloaded to Microsoft Excel and then analyzed. Outcomes are presented in the results chapter, and raw data is presented in the appendices.

Quantitative data was used in analysis. Data analysis was started by making graphs from data. After graphs were ready, trends were identified. These trends were used to form understanding what has been achieved during this SEO project. To gain deeper understanding, two different data comparison were used: 1) values before the project compared to values after the project and 2) trends during the project compared to last year trends from the same time period. Change percentages from these comparisons were used to determine successfulness of this project. Change percentages have been used in similar researches to determine successful (Malaga, 2007). Metrics were selected from many different areas such as traffic, sales, keyword data, and customer satisfaction.

4.4   Interventions for testing the content-centered method

Interventions are made for testing propositions. ElämysLahjat.fi is the case company where interventions are performed. ElämysLahjat.fi is the largest online store selling experience gifts in Finland and it is part of the international concept ActivityGifts (ElämysLahjat.fi/TietoaMeistä, 2015).

ElämysLahjat.fi had more than 700 experiences to choose from in 2013. Their business idea is to collect different experiences to one website where customers can browse different experiences and make a purchase (ElämysLahjat.fi/TietoaMeistä, 2015). Experiences are categorized into air, water, driving, leisure, and dining experiences. All optimization is executed in Finnish language. In addition, ElämysLahjat.fi had not practiced any earlier search engine optimization, which is offering possibility for improvement.

ElämysLahjat.fi wanted to optimize four following keywords: Christmas present, Father's Day present, gift for man, and wedding gift. These keywords were optimized because ElämysLahjat.fi had product categories with the same titles and these categories were essential for business.

Interventions can be divided into two different optimization levels: 1) producing written content containing keywords and 2) acquiring links towards content. Table 5 presents interventions.

Table 5 Interventions (see appendix 1)

Intervention	Date range	Optimization level
Intervention 1	October 2013	Written content related to keyword 'Christmas present'
		Written content related to keyword 'Father's Day present'
Intervention 2	November 2013	Written content related to keyword 'Christmas present' (produced to 10 different pages)
		Written content related to keyword 'Gift for man'
		Written content related to keyword 'Wedding gift'
Intervention 3	November 2013	Links pointing towards 'Christmas present' content (from 4 different sources)
		Link pointing towards 'Father's day' content
		Link pointing towards 'Gift for man' content
		Link pointing towards 'Wedding gift' content
Intervention 4	December 2013	Links pointing towards 'Christmas present' content (from 7 different sources)
		Link pointing towards 'Wedding gift' content

First two interventions were producing written content on ElämysLahjat.fi. Last two interventions were acquiring links pointing towards newly created content. In October, only content was created and published. In November, content were continued to be created and published. In addition, first links were acquired. In December, focus was only acquiring new links.

Content were produced around four selected keywords. Written content were produced to these product categories and total of 16 category pages were updated. Especially Christmas present keyword was important because Christmas season is essential for business.

Certain best practices were taken into the consideration when content with the keywords were created. These best practices were found from the literature review. The following list summarizes these factors:

- offer added value for visitor by producing useful content (Hipwell & Reeves, 2013),
- use keywords especially in headings of a body text (Cui & Hu, 2011),
- write long texts (Tober et al., 2014).

Links were acquired from the blogosphere. ElämysLahjat.fi was operating already one blog where they could acquire links. This blog was focusing topics around gifts. In addition, one new external blog was created were links could be acquired. This other blog was focusing Christmas topics. Total of 14 blog posts were published with links

pointing towards newly created content. Two best practices were used when acquiring links: 1) keywords were placed on anchor texts (Baye et al., 2014) and 2) majority of links were acquired through blog articles (ContentMarketingInstitute/Research, 2013).

Subjects of published blog articles were related to pages they were linking to, for example, "Gift ideas for Father's Day" article was linking to Father's Day content. A keyword was placed on anchor text. In this example, the anchor text was "Father's Day presents".

5   RESULTS

5.1   Results from the proposition 1

Here are presented results after executing interventions. Two metrics were used to measure the proposition 1: keyword rankings and traffic from the organic search. The proposition 1 is the following:

p1: Keyword-rich written content attracting links is improving search engine rankings of the page.

The proposition states that search engine rankings are increasing if content with keywords is produced on a web page and it attracts links. These actions has been done and reported in the previous chapter. Table 6 present keyword rankings before the project and after the project.

Table 6 Keyword rankings on Google Search (see appendix 2)

Keyword	Ranking in October 2013	Ranking in January 2014	URL
Joululahja (Christmas present)	5	2	elamyslahjat.fi/lahjat-kategorioissa/joulu-lahjat-joululahjat
Isänpäivälahja (Father's Day present)	3	2	elamyslahjat.fi/lahjat-kategorioissa/isanpaivalahjat-lahjat-isalle
Lahja miehelle (gift for man)	2	1	elamyslahjat.fi/lahjat-kategorioissa/lahja-miehelle-lahjat-miehille
Häälahja (wedding gift)	3	1	elamyslahjat.fi/lahjat-kategorioissa/lahjat-haa-haalahjat-haat

Rankings of all these keywords improved during this project. The URL column displays the web page where content was created. These same web pages were shown in the search results.

Number of visitors from the organic search has developed during this search engine optimization project. Table 7 presents website traffic from organic search to the pages that have been optimized.

Table 7 Visitors from the organic search (see appendix 3)

URL	Traffic: October 2012 - January 2013	Traffic: October 2013 - January 2014	Change
elamyslahjat.fi/lahjat-kategorioissa/joulu-lahjat-joululahjat	951	4 112	332.39%
elamyslahjat.fi/lahjat-kategorioissa/isanpaivalahjat-lahjat-isalle	1 491	3 193	114.15%
elamyslahjat.fi/lahjat-kategorioissa/lahja-miehelle-lahjat-miehille	1 812	3 482	92.16%
elamyslahjat.fi/lahjat-kategorioissa/lahjat-haa-haalahjat-haat	28	243	767.86%

Traffic has increased in the cases of all four pages that have been optimized. Change in the traffic has been presented with year-to-year comparison. These results are supporting the proposition 1 because keyword positions and traffic have increased on pages that have been optimized.

5.2   Results from the proposition 2

The second proposition suggests that search engine optimization with specific keywords can affect to search engine rankings of other keywords as well. This proposition is based on the assumption that search engine optimization actions are increasing overall relevancy of the website. This proposition is examined by reviewing overall search engine rankings and website traffic.

p2: Keyword-rich written content attracting links is improving search engine rankings of the whole website.

When studying the proposition 2, search engine rankings are not examined on the keyword level because the goal is to see an overall trend. Keyword data has been imported from the Google Webmaster Tools and Figure 13 illustrates outcome from this data.
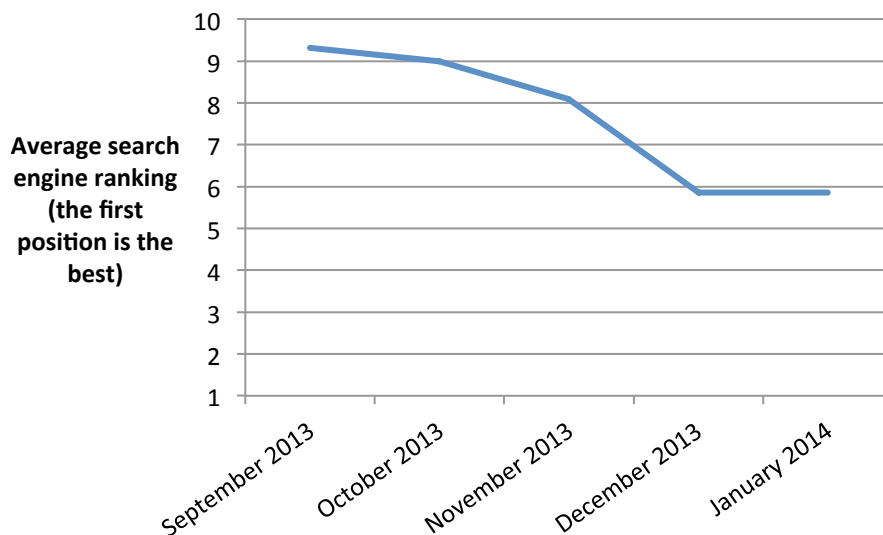
Figure 13 Average search engine ranking of ElämysLahjat.fi (see appendix 4)

Before starting this SEO project, the average keyword ranking was 9.3. After this project the average keyword ranking had decreased to 5.9. Lower average ranking is better than higher average ranking because it means that a website is found near the top results of Google. This change in average ranking means that rankings with many key-words have changed during this project, not only those that have been targeted by SEO actions.

Average ranking to this figure was calculated from the 500 popular keywords that have high search volumes. These 500 selected keywords are ones that have been the most searched during project period and ElämysLahjat.fi has been included in search results. This keyword data has been acquired from Google Webmaster Tools.

Website traffic is also examined. Website traffic includes only traffic from organic searches. Organic search traffic is compared to previous year to illustrate the trend.
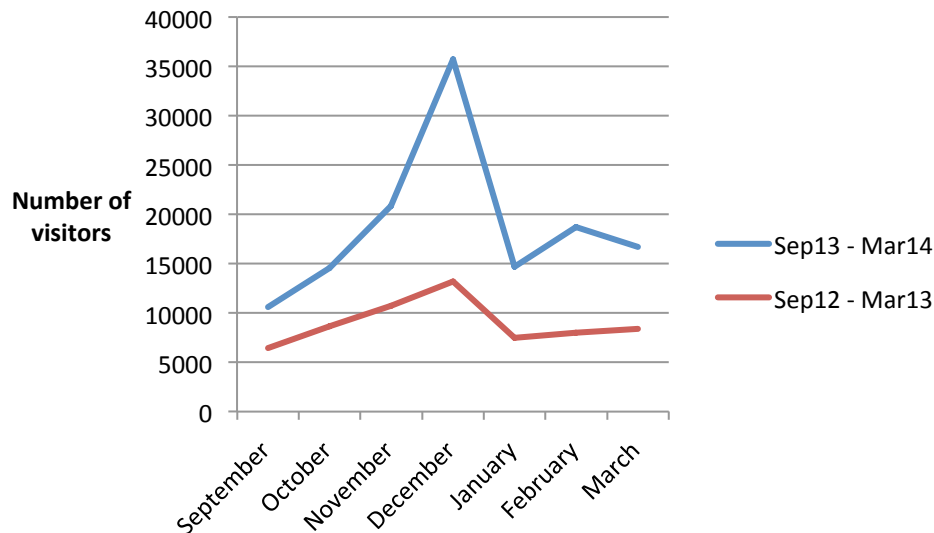
Figure 14 Organic traffic (see appendix 5)

An average monthly increase in traffic during project months has been 104% compared to the previous year. There were average of 9 000 visitors per month in 2012 during the period under review. The average monthly visitors increased to 19 000 in 2013 during the review period. Drop in traffic after Christmas can be related to seasonality, for example, Christmas keywords do not drive traffic after Christmas season.

5.3   User experience and sales metrics

User experience metrics are measuring how visitors are behaving on a website. If these metrics start to show negative trends, reason might be that changes made to the website are not good for user experience even thought they are improving search engine rankings. These situations should be avoided, and if negative trends occur, optimization routines must be adjusted to meet customer needs.

Time on site describes how long a visitor spends on a site consecutively. Page views are describing how many different pages a visitor loads during a single visit. Bounce rate is a percentage of visitors who leave the site immediately after landing there without continuing to view other pages within the website. Table 8 summarizes user experience metrics.

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Table 8 Engagement metrics (see appendix 6)

Metric	Value before	Value after
Time on site / visitor	3:41 min	3:58 min
Page views / visitor	4,8 pages	5,3 pages
Bounce rate	47%	44%

User experience metrics have remained approximately at the same level during the project, or even increased a little bit. Therefore, it can be concluded that this SEO project did not have negative impact to user experience.

Revenue is measuring this project from the sales perspective. Revenue have been compared to previous year to illustrate the trend. Only the sales that have come through an organic search are presented in Figure 15. This means sales where customer have come to the website through the organic search and made a purchase during that same session.
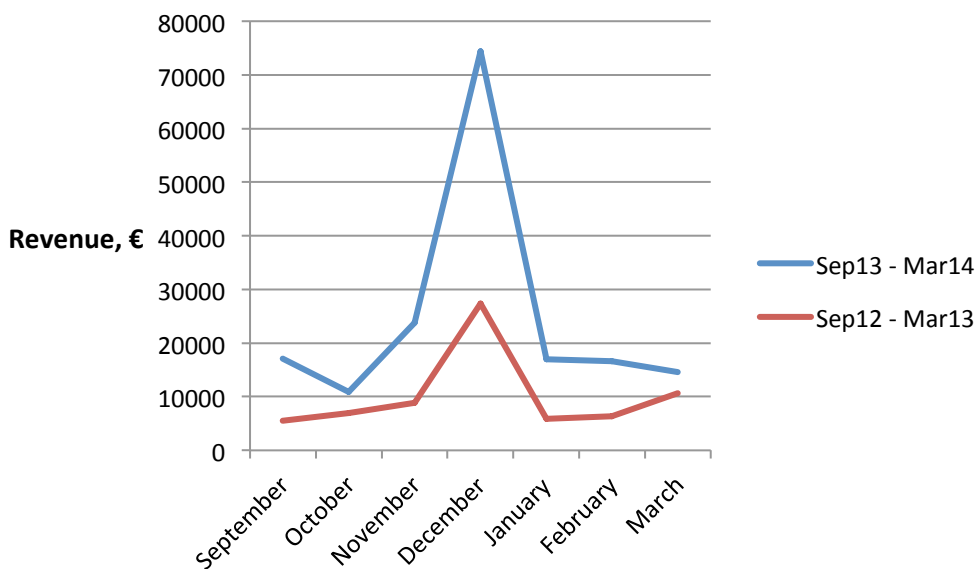
Figure 15 Revenue from organic search (see appendix 7)

An average revenue increase during this project has been 143% compared to the previous year. In 2012, total organic revenue from this period was 70 000€. In 2013, total organic revenue from this period increased to 175 000€. This means that average monthly sales have increased approximately 15 000€ compared to last year. There is a huge drop in sales after Christmas. Reason can be found from Christmas keywords that drive much traffic during Christmas. In addition, Christmas is a major season for selling gifts that also explains huge monthly changes in sales.

5.4　　Limitations and reliability

The case company ElämysLahjat.fi is performing other simultaneous marketing efforts besides search engine optimization such as paid advertising in Google, Facebook marketing, and sending newsletters. All marketing efforts are increasing brand awareness that can have positive impact on search engine rankings (Baye et al., 2014). For that reason, organic traffic can improve even without any search engine optimization. There is no way to exclude the effect of brand awareness when measuring the search engine optimization efforts. However, organic traffic of year 2013 did not grow noticeably before starting the SEO project and growing trend started just after search engine optimization was started (see appendix 5). One way to improve reliability of results is to use SEO specific metrics. For example, organic search traffic as a metric is excluding all traffic but one coming through organic search results.

Data was mainly obtained from the popular analytic systems that are suitable for *small and medium-size enterprise (SME)* such as Google Analytics and Google Webmaster Tools (Nakatani & Ta-Tao, 2011). Selected metrics are closely related to search engine optimization, and they are popularly used within the SEO industry (SearchEngineWatch/Metrics, 2012). In addition, all results are showing consistent outcomes.

Seasonality of traffic should to be considered when collecting data. Increase in search volumes automatically increases website traffic even without any search engine optimization. By comparing traffic and sales to previous year, the effect of seasons is removed because the effect is same every year (GoogleTrends/Explore, 2013).

Finally, literature review is an important area in this research. It consists of popular journal articles and web sources. There has been paid extra effort for evaluating trustworthiness of industrial references. These articles have been chosen from the industry leaders such as Moz, Search Engine Journal and Google. Industry references have been reflected critically and they are supported with academic references.

Discussion about constantly changing nature of search engines is worth mentioning. Search engines are updating their search algorithms constantly and that sets challenges for search engine optimization (Kritzinger & Weideman, 2013). There is a risk that new findings might not be relevant for a long time in the SEO related research. However, long-term trends can be recognized within search engine optimization, for example, the importance of links have been noticed since Google was founded (Brin & Page, 1998).

Nowadays, parallel discussion about content can be seen among SEO practitioners. There have been discussed that producing high quality content to a website in order to improve search rankings would be a new long-term trend in search engine optimization. In addition, Google has said that content is growing its importance as a ranking factor in

the future (MattCutts/Content, 2014). Results from the implementation of the content-centered method support this discussion.

6 CONCLUSIONS

6.1 Key findings

Search engine optimization was studied in this thesis. Findings to the first research questions can be found from the theory part. Empirical part offers information for last two research questions. Table 9 summarizes key findings.

Table 9 Key findings

Research question	Findings	Practice
What is intersection of content marketing and search engine optimization?	Content marketing practices can be used to improve search engine rankings	Theoretical: earlier literature
What is intersection of content on a web page and keywords used on it?	Keywords can be placed on newly created content in order to improve search engine rankings with these search terms	Empirical: case ElämysLahjat.fi
What is intersection of content on a web page and links pointing towards it?	Links pointing towards newly created content on a web page are increasing search engine rankings of that page	Empirical: case ElämysLahjat.fi

The first research question contains two really foundational terms that are search engine optimization and content marketing. On the basis of the literature review, search engine optimization means improving organic search engine rankings. SEO methods can be divided into the three categories: on-page optimization, off-page optimization, and technical optimization. On the basis of the literature review, content marketing means creating the interesting content for target audiences. Different content types and channels can be used.

The first research question is looking answer for question what is the connection between search engine optimization and content marketing. Based on the literature review, content on a web page can increase search engine rankings of the page. Keywords can be placed within content to improve search engine rankings with these keywords. This is the connection between these two areas.

Answers for last two research question can be found from the empiric part where content, keywords, and links were used to improve search engine rankings of the case company. These three tactics were chosen on the basis of literature review. Keywords where purposefully used when content was written. Theory also suggests that links are

correlating positively with search engine rankings. Two propositions were formed in order to test collaborative effect of these three tactics.

The proposition 1 states that "keyword-rich written content attracting links is improving search engine rankings of the page". Content with keywords was produced and links acquired towards that content. Results are showing that search engine rankings of the pages where content was created improved with wanted keywords. In addition, average traffic of these pages increased 327%. Based on this research, the proposition 1 seems to be true and answer to the last two research questions can be found: usage of keywords in content and links pointing towards content are together increasing search engine rankings.

The proposition 2 is testing how big the impact of the content-centered method is. The proposition 2 states the following: "keyword-rich written content attracting links is improving search engine rankings of the whole website". Results are showing that average keyword ranking improved during the testing of the propositions and average traffic of the whole website increased 104%. These results are supporting the proposition 2 to be true. Content, keywords, and links used together are forming the content-centered method. These results from the proposition 2 are indicating that the content-centered method has potential when executing search engine optimization.

6.2   Content-centered method

The content-centered method unites search engine optimization and content marketing. Producing content to improve search rankings is a new trend in search engine optimization (Shih et al., 2013), and content marketing best practices are used to take full advance of it. Content forms the core for this method.

Keywords have a supporting role in the content-centered method. Keywords have been included to the method as they are in the core of search engine optimization. Keywords are placed on newly produced content and links.

Links are included to the content-centered method to show relevancy of newly created content to search engines. When new content attracts links, search engines are considering it as relevant content, and will improve its rankings on search results. Table 10 summarizes the content-centered method.

Table 10 Components of the content-centered method

Component	Role	Reason for inclusion	Alignment within search engine optimization
Content	Forms the core of the content-centered method	Currently a long-term trend in search engine optimization	On-page optimization
Keywords	Supporting: keywords are placed in content and anchor texts	Are in the core of search engine optimization	On-page and off-page optimization
Links	Complementing the method by adding off-page dimension to the optimization	Are boosting produced content by indicating that content is high quality because it attracts links	Off-page optimization

Profitability of the content-centered method is discussed because high profitability offers reason for management to implement it. Monthly visitors through organic search increased from 60 000 to 130 000, and sales increased 143% compared to corresponding months of the last year in the case of ElämysLahjat.fi. Positive results from this research are arguing on the behalf of search engine optimization as a profitable marketing channel. Secondly, the content-centered method gives a concrete way to implement search engine optimization that can be presented to the management.

Results from propositions 1 and 2 are supporting arguments that content would be a new trend in search engine optimization. The content-centered method is taking advance of this new trend in search engine optimization in order to be relevant for years to come. Different parts of content-centered method could not be analyzed separately because only the collaborative effect was measured. However, producing content was the key element of this method.

All metrics are indicating positive results during this project. Therefore it can be concluded that the content-centered method for search engine optimization has proven to be successful in this particularly case.

6.3   Future research

As an idea for future research, the role of links as a part of the content-centered method can be re-evaluated. Links are example of a long-term trend in search engine optimization that has started in the 1990s. Nowadays, they are losing importance as a ranking

factor (SearchEngineLand/BacklinksImportance, 2014). Therefore, a possible idea for further research could be adjusting the content-centered method by replacing links with social signals that were other off-page optimization method presented in this thesis.

Another idea for future research is not to replace links from the content-centered method but only adjust their role. Now links were acquired from several small blogs. Some articles are suggesting that links are not working anymore when increasing search rankings (Moz/Blogs, 2012). One possibility could be to reduce the number of acquired links and focus only to get few links from popular sites.

7   SUMMARY

This thesis was about search engine optimization. The content-centered method was constructed for search engine optimization. This was done by reviewing literature about search engine optimization and content marketing, and uniting these theories to form this method. After that, the method was tested in a real business environment using two propositions. Results are suggesting that the content-centered method is improving search engine rankings.

In the introduction, need for search engine optimization was highlighted. Online business is growing fast, and first positions in search engine result page are generating the majority of search traffic. Motivation for this study was to generate knowledge how content can be used to improve search rankings. Content has gained popularity as a ranking factor but there is a lack of research knowledge about it.

In the first theory chapter, search engine optimization literature was reviewed. It was divided in three main categories: on-page optimization, off-page optimization, and technical optimization. Title, URL, navigation, images, h1, and content were reviewed under on-page optimization. Content was discussed only briefly. Acquiring links and social signals were included in off-page optimization. Technical optimization consisted of indexing, meta description, site speed, and structural data. Keywords and black hat optimization methods were also discussed.

In the second theory chapter, content marketing literature was reviewed. Content marketing channels and best practices to produce content was discussed. After that, there was discussed how Google operates. Search engine point of view is important to understand in connection with content marketing because search engines have started to appreciate content as a ranking factor. In synthesis, content marketing was examined against search engines and search engine optimization to outline its alignment among these two other subjects.

In the empirical part, two propositions were created for testing the content-centered method. Firstly, the methodology used in this thesis was introduced, design science. Data collection and analysis were also included to the empirical chapter. In addition, structure of this thesis follows two areas of design science: construction of a method and evaluation of a method. The method was constructed in the first empirical chapter and theory chapters were used as background knowledge for doing that. Evaluation of the content-centered method was presented in results and conclusions.

In the results chapter, proposition 1 and proposition 2 were presented separately. In addition, user experience and sales statistics were presented to give more insight about this project.

In conclusions, answers for research questions were presented. The first research question was answered based on the literature review. Last two research questions were

answered based on the empirical research. The findings about the content-centered method were summarized and the different parts of the method were discussed. In addition, ideas for future research were presented.

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APPENDICES

APPENDIX 1   Performed search engine optimization actions

	Type	Date	Link
1	Type	Date	Link
2	Christmas blog	18.12.2013	http://joululahjaopas.wordpress.com/2013/12/18/millainen-on-paras-joululahja-aidille/
3	Christmas blog	19.12.2013	http://joululahjaopas.wordpress.com/2013/12/19/parhaat-joululahjavinkit-tyttoystavalle/
4	Christmas blog	21.12.2013	http://joululahjaopas.wordpress.com/2013/12/21/kekselias-joululahja-lapselle/
5	Christmas blog	21.12.2013	https://joululahjaopas.wordpress.com/2013/12/21/ratkaisu-ongelmaan-taydellinen-joululahja-18-vuotiaalle/
6	Gift themed blog	5.11.2013	http://lahjaopas.wordpress.com/2013/11/05/ideoita-isanpaivaksi/
7	Gift themed blog	7.11.2013	http://lahjaopas.wordpress.com/2013/11/07/erilainen-joululahja-lapselle/
8	Gift themed blog	9.11.2013	http://lahjaopas.wordpress.com/2013/11/09/miten-hankkia-haaparin-nakoinen-lahja/
9	Gift themed blog	24.11.2013	http://lahjaopas.wordpress.com/2013/11/24/tuottaako-joululahjan-valinta-vaikeuksia/
10	Gift themed blog	25.11.2013	http://lahjaopas.wordpress.com/2013/11/25/miten-olisi-erilainen-joululahja-isoaidille/
11	Gift themed blog	29.11.2013	http://lahjaopas.wordpress.com/2013/11/29/miten-antaa-paras-joululahja-isalle/
12	Gift themed blog	4.12.2013	http://lahjaopas.wordpress.com/2013/12/04/joululahja-pariskunnalle-romantiikkaa-vai-riehakkuutta/
13	Gift themed blog	12.12.2013	http://lahjaopas.wordpress.com/2013/12/12/millainen-on-jouluinen-haapaivalahja/
14	Gift themed blog	18.12.2013	http://lahjaopas.wordpress.com/2013/12/18/parhaat-joululahjavinkit-poikaystavalle/
15	Gift themed blog	21.12.2013	http://lahjaopas.wordpress.com/2013/12/21/viime-hetken-joululahjavinkit-aidille/
16	Updated category description	22.10.2013	http://www.elamyslahjat.fi/lahjat-kategorioissa/lahja-naiselle-lahjat-naisille?gclid=CJm6k5yKqroCFTB8cAod4AUAXA
17	Updated category description	31.10.2013	http://www.elamyslahjat.fi/lahjat-kategorioissa/isanpaivalahjat-lahjat-isalle
18	Updated category description	31.10.2013	http://www.elamyslahjat.fi/lahjat-kategorioissa/joulu-lahjat-joululahjat
19	Updated category description	1.11.2013	http://www.elamyslahjat.fi/lahjat-kategorioissa/lahja-miehelle-lahjat-miehille
20	Updated category description	7.11.2013	http://www.elamyslahjat.fi/lahjat-kategorioissa/lahjat-haa-haalahjat-haat
21	Updated category description	12.11.2013	http://www.elamyslahjat.fi/lahjat-kategorioissa/joululahja-naiselle
22	Updated category description	12.11.2013	http://www.elamyslahjat.fi/lahjat-kategorioissa/joululahja-miehelle
23	Updated category description	12.11.2013	http://www.elamyslahjat.fi/lahjat-kategorioissa/joululahja-kahdelle
24	Updated category description	13.11.2013	http://www.elamyslahjat.fi/lahjat-kategorioissa/joululahja-lapsille
25	Updated category description	25.11.2013	http://www.elamyslahjat.fi/lahjat-kategorioissa/joululahja-aidille
26	Updated category description	25.11.2013	http://www.elamyslahjat.fi/lahjat-kategorioissa/joululahjat-iskalle-lahjaideat-isille-isalle
27	Updated category description	25.11.2013	http://www.elamyslahjat.fi/lahjat-kategorioissa/joululahja-vaimolle
28	Updated category description	29.11.2013	http://www.elamyslahjat.fi/lahjat-kategorioissa/top-30-joululahjat
29	Updated category description	29.11.2013	http://www.elamyslahjat.fi/lahjat-kategorioissa/joululahjat-aviomiehelle
30	Updated category description	29.11.2013	http://www.elamyslahjat.fi/lahjat-kategorioissa/joululahja-poikaystavalle

APPENDIX 2   Keyword rankings

	A	B	C	D	E
1	Keyword	Average in October	Average in January	Average in February	Average in March
2	Lahja miehelle	2	1	2	1
3	isänpäivälahja	3	2	2	3
4	joululahja	5	2	3	3
5	Häälahja	3	1	1	1
6	Data collected from Google Search				

APPENDIX 3   Landing pages

Landing Page	Medium	Sessions ↓	Revenue
		157.59% ▲ 11,030 vs 4,282	207.21% ▲ €5,061.29 vs €1,647.51
1. /lahjat-kategorioissa/joulu-lahjat-joululahjat	organic		
Oct 1, 2013 - Jan 31, 2014		4,112 (37.28%)	€831.96 (16.44%)
Oct 1, 2012 - Jan 31, 2013		951 (22.21%)	€112.03 (6.80%)
% Change		332.39%	642.65%
2. /lahjat-kategorioissa/lahja-miehelle-lahjat-miehille	organic		
Oct 1, 2013 - Jan 31, 2014		3,482 (31.57%)	€2,780.47 (54.94%)
Oct 1, 2012 - Jan 31, 2013		1,812 (42.32%)	€1,535.49 (93.20%)
% Change		92.16%	81.08%
3. /lahjat-kategorioissa/isanpaivalahjat-lahjat-isalle	organic		
Oct 1, 2013 - Jan 31, 2014		3,193 (28.95%)	€1,256.18 (24.82%)
Oct 1, 2012 - Jan 31, 2013		1,491 (34.82%)	€0.00 (0.00%)
% Change		114.15%	∞%
4. /lahjat-kategorioissa/lahjat-haa-haalahjat-haat	organic		
Oct 1, 2013 - Jan 31, 2014		243 (2.20%)	€192.67 (3.81%)
Oct 1, 2012 - Jan 31, 2013		28 (0.65%)	€0.00 (0.00%)
% Change		767.86%	∞%

APPENDIX 4   Average keyword rankings

	A	B	C
1	500 the most popular keywords		
2	Month	Average Position	Number of keywords
3	September	9,32	468
4	October	9,00	500
5	November	8,09	500
6	December	5,85	500
7	January	5,85	500
8	Data is collected from Google Webmaster Tools		

APPENDIX 5   Organic traffic

	A	B	C
1	# Organic traffic		
2	# 20130901-20140331 20120901-20130331		
3	#------------------------------------		
4	Month	Visitors	Year-to-year comparison
5	September 2013	10600	65 %
6	October 2013	14586	69 %
7	November 2013	20886	95 %
8	December 2013	35706	171 %
9	January 2014	14712	96 %
10	February 2014	18737	135 %
11	March 2014	16722	100 %
12	September 2012	6420	4180
13	October 2012	8635	5951
14	November 2012	10700	10186
15	December 2012	13178	22528
16	January 2013	7512	7200
17	February 2013	7973	10764
18	March 2013	8365	8357
19			
20	Data is from Google Analytics		

APPENDIX 6   Engagement metrics

	A	B	C	D
1	# ------------------------------------			
2	# www.elamyslahjat.fi			
3	# Channels			
4	# 20130901-20140331			
5	# ------------------------------------			
6				
7	Month Index	Bounce Rate	Pages / Session	Avg. Session Duration
8	September	47 %	4,8	0:03:41
9	October	46 %	4,9	0:03:42
10	November	42 %	5,4	0:03:56
11	December	40 %	5,8	0:04:19
12	January	45 %	5,2	0:03:49
13	February	46 %	5,0	0:03:29
14	March	44 %	5,3	0:03:58
15		43 %	5,3	0:03:55
16	Data is from Google Analytics			

APPENDIX 7   Revenue from organic search

	A	B	C
1	#www.elamyslahjat.fi		
2	#Sales Performance (organic revenue)		
3	#20130901-20140331 20120901-20130331		
4	Month Index	Revenue	Year-to-year comparison
5	September 2013	17053	212 %
6	October 2013	10897	57 %
7	November 2013	23735	168 %
8	December 2013	74403	172 %
9	January 2014	16962	187 %
10	February 2014	16652	160 %
11	March 2014	14589	37 %
12	September 2012	5469	11584
13	October 2012	6963	3935
14	November 2012	8862	14873
15	December 2012	27367	47036
16	January 2013	5918	11044
17	February 2013	6409	10243
18	March 2013	10619	3970
19	Data is from Google Analytics (ecommerce pixel)		