



Research on Search Engine Optimization Strategy for Voice Search

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**This independent study report has been approved to be a partial fulfillment in the
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ABSTRACT

Research Title : Research on Search Engine Optimization Strategy for Voice Search
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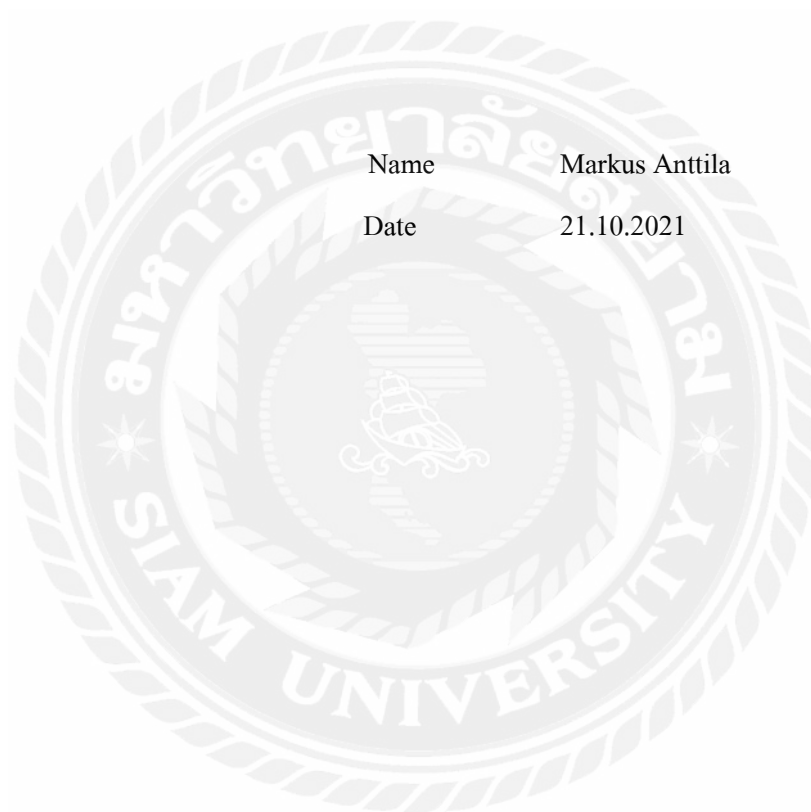
This research discussed search engine optimization strategies for voice search and offers instruction how to increase ranking on voice search engine results by using keyword optimization techniques. This research aimed to find how businesses can gain a competitive edge over their competitors with voice search optimization and grow their revenue with limited time and resources. While more than half of Internet traffic begins on search engines, search engine optimization undeniably plays an important role in both online and offline businesses. This research targeted all business owners who are looking to plan and implement voice search optimization strategies to their company website for the first time. This independent study research reviewed professional literature and Internet sources related to traditional search engine optimization, as well as voice search optimization. All the information was gathered from multiple sources, then compared to each other while being critically evaluated in order to form realistic research.

Keywords: Voice keyword optimization, Keyword optimization, SEO, Search engine



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1. Introduction

1.1 Research on Search Engine Optimization Strategy for Voice Search

With the rapid development of Internet search engine technology, it not only changes the way how search engines develop their algorithms, but it also changes how people are able to gather the information they need online. The digital marketing field is constantly evolving with new trends coming and going. Voice search is one of the most promising trends surfacing the digital marketing landscape within the last 10 years.

These days most of the search engine queries are done by typing in the search using keywords. However, no matter how advanced technology gets, the best communication tool for humans will always be their voice.

Humans are born with the skill to communicate with words produced with their voices. According to Google's statistics ("Voice search mobile use statistics", n.d.), 27% of global online population is already using voice search on their mobile phones.

Voice search is a technology which allows user to perform searches by speaking for a device (Bennett, 2020). Voice search userbase loves the convenience of voice search, as it is easier and faster to say the search terms out loud rather than typing them with keyboard.

Whether people agree on voice search optimization being significant search engine optimization (SEO) strategy or not, the voice search is already playing a major role in local searches and numerous of businesses have been optimizing and will be optimizing for it. While voice search keeps evolving and going forward, it is definitely a part of the future. If business owners can keep up with the voice search optimization, they may end up having an reward of competitive advantage. In today's fierce competition what happens online, a competitive advantage is very highly appreciated feature.

Voice search is still relatively new phenomena and because of that, it is important for businesses to take action and make their websites voice search friendly in order to gain the first-mover advantage and competitive edge.

1.2 Research Problem

Search engine optimization is a field where successful website owners always need to be knowledgeable with a long line of SEO skills in order to rank high positions on search engine result pages. The new trends come - and sometimes go, but the voice search is here to stay. While voice search is gaining more popularity and visibility among the population, it is getting increasingly more important for website owners to be aware of how to optimize their websites for customers who are using voice search.

A 2019 study about voice search readiness targeted 73,000 business locations found out that 96% of businesses are not “voice search ready” (“voice search readiness report”, n.d.). When it comes to new search engine - based technologies, companies have to make sure that their businesses can be found online.

Over 90% of the pages ranked in Google receive no organic traffic at all from Google’s search engine (Ong, 2020). Since majority of the online experiences begin with a search engine, it is crucial to have well optimized website in order to drive organic traffic and later convert the traffic into paying customers. Majority of the professional marketers claim that search engine optimization is more effective at driving sales than paid per click (PPC) advertising (Dopson, 2020). If businesses completely steer their efforts into PPC advertising only, they are missing a great chance to grow their business on free organic traffic sector.

Businesses can have awesome product or service to offer, but without the right keywords and the visibility on search engines, the potential customers will struggle to find about them.

The research problem of this study is to identify voice search optimization techniques and how especially small businesses can implement them most efficiently to their business website.

1.3 Research Objectives

The main objective of this research is to identify and create voice search optimization processes that can be implemented to form a strategy ensuring better voice search visibility for a website in major search engines, while mostly concentrating on Google’s search engine.

This research will also serve as a guide for businesses who are planning to implement and optimize their website for voice searches regardless of the industry which they are based in.

1.4 Scope of Research

This study focuses solely on processes and techniques that can directly help websites achieving more traffic from voice searches performed on major voice search platforms. For this study I have used my personal skills related to search engine optimization and I have reviewed literature from over 100 published papers, researches and articles from authoritative sources. I have selected 50 of them, referenced at the end of my research.

Due to the limitations of how big and complicated the search engine optimization is, this research paper strictly examines the technical voice search aspect related to search engine optimization only. This paper will

also not go into details of basic search engine optimization techniques, and therefore prior basic knowledge about SEO is needed in order to make this research meaningful. Also due to the limitations of the size and complicity of the different search engines, this research paper only focuses on Google's search engine optimization. However, the search engine optimization processes discussed in this research papers can be used for optimizing for other search engines as well.

Research methods presented in this paper are explored and based on qualitative study which involves analyzing and evaluating already existing knowledge, data and practices in the field of web development and search engine optimization. This paper will mainly focus on two different research methods - literature survey and empirical research method.

This paper collected broad selection of materials related to voice search, SEO and web development in order to gain broadest possible examination of the topic. By cross-checking the material and leaving out all the non-credible materials, it was possible to gather realistic answers for the research problem. This research paper includes only materials, which were confirmed by multiple sources, never relying on only one source.

1.5 Research Significance

Search engine optimization market is a highly competitive field that has a long history since the first search engines appeared online. In the fierce competition, every website owner who wants to rank high on search engine result pages (SERP) is trying to gain competitive edge to their competitors. In order to gain this important edge, it is necessary to stay at the top of search engine optimization trends. Voice search has showed exponential growth in United States within the last ten years, and implementing voice search optimization to websites in order to gain better standings in search engine result pages, especially in the countries where English is not first language will help companies to achieve important competitive edge.

Google's English voice recognition has an accuracy of 95% and it is not the only company who is investing their time and money into voice recognition. For example, iflytek, a company from China, has Chinese speech recognition system which has an accuracy of 98%. The big global movement on researching, developing and implementing voice recognition-based technologies shows that these companies are expecting a widespread usage of voice searches, therefore making voice search optimization strategies stand in important role for now and also in the future (Wadhvani, 2020).

2. Literature review

2.1 Voice Search

According to digital marketing specialist Keith Bennett (2020), voice search is a type of vocal technology which lets users to perform searches by speaking for a device, which could be a computer, a smartphone or a smart home device which is equipped with voice search capability.

Originally voice search was designed as a software to recognize speech. However now it is also being used as a service by smartphones and small internet-equipped devices. These devices can be smart home speakers such as Amazon Alexa, or a speech recognition software installed in a car entertainment system, which helps user to use navigation or change songs by simply speaking to them.

Voice search applications include, but are not limited to: voice dialing, performing search queries on search engine, searching for videos or audio files, opening applications or programs, selecting between options, requesting information, or giving wide range of commands. (Goulart, 2020)

In this research paper, combining the previous researches and articles written by specialists in technology and marketing field, it can be concluded that voice search is a technology which uses the human voice to process searches and different kind of requests. Voice search can be considered as being a personal digital assistant.

2.1.1 Characteristics of voice search

British search engine optimization professional Neil Patel (2020) believes in his blog that voice search 3 main characteristics can be divided into following parts:

- a. Voice searches contains conversational words and are longer compared to more traditional searches which are done via keyboard.
- b. Voice search is led by mobile driven queries
- c. Users performing voice search queries want immediate results

2.1.2 History of voice search

Voice search is not a new phenomenon, research and the history of inventing devices which were capable of recognizing voice dates all the way back to 1952 when a team at Bell Labs designed a device which was capable of understanding spoken numbers.

Voice recognition kept showing huge development especially in the 1970's when the technology used in speech recognition developed from understanding few hundred words into understanding of thousands of words (Crewe, 2018).

According to Google engineers, the modern voice recognition and voice search we know today was implemented in 2008 when Google introduced Google Mobile App for Apple iPhone which included feature called search by voice (Schalkwyk et al., n.d.).

2.1.3 Future of voice search

According to Ignite Digital founder, Matthew Goulart (2020), Machine learning and artificial intelligence are being developed and growing at an exponential levels, which means that website owners have to keep up with the growing trend of voice search and optimize their SEO strategies in order to allocate voice search.

People are switching their lives toward hands-free digital world, where most of the smartphones and smart devices have AI-technology installed into them. As artificial intelligence and machine learning will keep growing in both technical and popularity aspects, the world is getting more advanced and marketing specialists and website owners should already be looking into the future and facilitating their online presence suitable for voice search. Optimization for voice search – technology is not just latest marketing trend. Voice search is here to stay, and it is becoming a necessity to optimize websites for the technology, or businesses are risking losing valuable customers to those, who have already adjusted their online presence to facilitate voice search. As the time passes on, it will be more and more difficult to stay ahead of the competition (Wadhvani, 2020).

There are still few concerns surrounding voice search. In total, 41% of the voice search users were concerned about the voice search technology (Olson & Kemery, 2019). Out of these 41% of concerned people, 52% were worried about data security, and 41% had concerns of the voice search-enabled devices actively listening and recording them (Olson & Kemery 2019). These are kind of issues that voice technology owners need to address correctly in order for keeping their users safe and comfortable.

As we go towards the future, speaking directly to a search engine will become even more convenient and commonplace than what it is being right now.

2.1.4 Popular industries for voice searches

According to a study performed by BrightLocal.com, the top five industries affected by voice searches are: Restaurants and cafes, grocery stores, food delivery, clothing stores and hotels (Murphy, 2018). In other words, these are the industries which are most likely to achieve biggest gain if they implement voice search optimization techniques into their online platforms. However, all of the industries with online visibility have a chance of getting boost after optimizing for voice search. The reason for these five given industries being in the list of top five voice search affected industries lies in a fact that these industries are getting more frequent searches than lawyers for example. The businesses which optimize their websites for voice search will gain competitive edge as currently we are still in relatively early stage for voice search technology.

2.1.5 Uses for voice search

A voice report suggests that quick facts, navigational queries, and searches looking for a product or service have been the most common user cases of voice search (Olson & Kemery, 2019). Most likely we are going to see increase in sophisticated and more complex search queries in the future, as well as higher volumes of voice searches in general.

How are people using digital assistants today?

Searching for a business	47%	Making a purchase	25%
Asking for directions	65%	Providing feedback for a product/service	19%
Searching for a quick fact	68%	Contacting customer service or support	21%
Making a shopping list	39%	Changing an order	16%
Researching a product/service	44%	Cancelling an order	14%
Searching for a product/service	52%	Accessing banking or personal financial information	11%
Comparing products/services	31%	Accessing credit card accounts	10%
Price comparison for product/services	30%	Other	5%
Adding items to a shopping cart	26%		

Figure 1. How are people using digital assistants today? (Olson & Kemery, 2019)

2.2 Search Engine Optimization

Executive editor of Search Engine Journal Danny Goodwin states in a blog post that search engine optimization (SEO) can be defined as the process of optimizing a website and its contents in a way that the website will appear in noticeable positions in the organic search results of a search engine results page (SERP). In order to gain these highly valued and noticeable positions, SEO requires an understanding of how search engines work, what people are searching for, and how and why people search. (Goodwin, 2020)

2.2.1 Characteristics of search engine optimization

SEO can be divided into two main categories: on-page SEO and off-page SEO. Both on-page and off-page SEO are important to the website that aims to get higher rankings on search engines.

2.2.2 On-page SEO

On-page SEO refers to the elements and actions that are in control of the website owner. It uses content and technical aspects of the website to improve the quality of a page in the eyes of a search engine algorithm (The Complete Guide to On-Page and Off-Page SEO, 2019).

2.2.3 Off-page SEO

According to MOZ off-page SEO refers to the elements that are performed out of control of the website owner, in order to impact the rankings of the website within the SERP (Off-Page SEO Ranking Factors, 2020).

2.2.4 Development of search engine optimization

According to Google, last year alone they made 3620 improvements on their search engine algorithm (How Search Works, n.d.). This number has been steadily increasing yearly. 4 years ago, in 2016, Google made 1653 improvements on their search algorithm, which is almost 50% less than in 2019 (Meyers, 2019). Many of these updates consist of small and relatively minor changes, and they do not affect big number of websites. For example, Google might update their algorithm on how medical search terms are ranked in searches made in Norwegian language. This kind of algorithm update only affects very small number of websites around the world.

Google makes core search engine updates few times every year. These bigger and more complex core updates make significant changes to Google's search engine algorithms. Core updates almost always produce notable effects in how websites are ranked around the world. Some of the websites will notice spiked drops or gains within the SERPs during and after the core updates (Sullivan, 2019).

According to latest statement from Google, they want website owners to provide the best content they can. Good and informative content is what Google's algorithms seek to reward (Search Engine Optimization (SEO) Starter Guide, 2020).

2.3 Keyword Optimization

Keyword optimization, also known as keyword research, is a core search engine optimization process that involves researching and selecting words and phrases that a website owner's target market uses when performing searches via search engine. Based on the research, the best performing keywords are chosen and strategically placed into the content of the website, in order for the content to appear higher on search engine

results page (Learn SEO, n.d.). Skillful keyword optimizers focus on determining 3 main aspects of the keywords - keyword popularity, keyword difficulty and search intent while performing keyword researches.

2.3.1 Google's major search engine algorithm updates affecting voice search queries

Search engines used to work based on lexical searches, which looked for literal matches or variants of the searched keywords. Google introduced hummingbird update to their search engine algorithm in August, 2013 (Pedraza, 2020). Most importantly, hummingbird update brought semantic searches into the Google's algorithm. Semantic search is designed to improve search accuracy by understanding users search intent and the contextual meaning of the search terms used to perform the search. Google keeps track of the user's online behavior such as personal information and specific online surfing habits. By doing this, Google will get deeper understanding of the next search intent. The more data Google has about any given person's online habits, the better understanding Google will have about the user. In the end, this will lead into a better user experience.

Google also uses a technology called RankBrain, a Google's own system which is using machine learning and artificial intelligence in order to help Google's search engine to recognize and understand words better while improving the quality of search engine results.

In 2019 Google introduced their big algorithm update which is known as BERT (Bidirectional Encoder Representations from Transformers). Google's BERT update focuses on improving the interpretation of complex long-tail searches, while displaying more relevant search engine results than ever before. For BERT, Google uses natural language processing, which helps Google's search engine to understand semantic searches and the true user intent behind them.

These 3 major core updates which Google has performed within the last 7 years are the most important ones to consider when evaluating how and why Google tries to understand and improve their voice search experience for their users.

2.3.2 The differences between voice search and text search

Voice search is dramatically different than traditional, keyboard based online search. The main difference in between them is how the methodology of input and the level of conversational language changes. Voice search is conversational, it is more natural, and it consists of longer sentences. Search queries performed by keyboard are very basic and limited in length, almost looking like a primitive communication. When users

perform a traditional search with a keyboard, they rely on typing few simple words and let the search engine to figure out what is the real intent behind the given keywords. While doing searches via keyboard, people are more likely willing to adjust their search queries in order to find what they are looking for.

A 2018 study on natural language found out that while people are using voice searches, they have expectation of the common understanding levels towards the voice search enabled device, just like as if the people would be talking to another human being (Sentence, 2018). This psychological trick makes people to use more complex and longer search queries while using voice searches. Users also want the voice search process to be seamless and hassle free while expecting that their questions are fully understood straight on the first try.

2.3.3 Length of searches

As discussed in chapter 2.1.5, voice search dramatically changes the methodology of input. People are used on searching one or two-word searches while using the common search with the keyboard. According to a analyze performed by Backlinko.com Dean (2018), Voice search lengths are 29 words on average. If businesses want to adapt to these longer search queries, it is necessary to design their keyword strategy to suit long-tail keywords. Keyword optimization has been shifting towards natural phrases and language which will be taking over short keywords, especially when it comes to voice search optimization. Benefits of long-tail keywords include the following: lower competition, lower PPC bid costs, and better performance on semantic search queries (Kakkar, n.d.).

2.3.4 Voice Queries based on questions

Voice searches are longer, and most of them are also in the form of a question. For example, a search term that would be typed with keyboard would usually be something like “red shoes”, while in voice search query, the same query would be phrased like “where can I buy red shoes?” Keeping this in mind, it is worthy to look at keywords more in a form of questions rather than just words and sentences. Just analyzing how people are looking answers for their questions by asking specific questions such as: “how”, “what”, “where”, “when” and “who”.

Trigger Words	Count	% of Total
how	658,976	8.64%
what	382,224	5.01%
best	200,206	2.63%
the	75,025	0.98%
is	53,496	0.70%
where	43,178	0.57%
can	42,757	0.56%
top	42,277	0.55%
easy	31,178	0.41%
when	27,571	0.36%
why	25,980	0.34%
who	24,930	0.33%
new	24,779	0.33%
recipe	22,967	0.30%
good	22,807	0.30%
homes	21,132	0.28%
make	19,774	0.26%
does	19,449	0.26%
define	19,375	0.25%
free	18,315	0.24%
i	18,245	0.24%
list	17,136	0.22%
home	17,118	0.22%
types	16,575	0.22%
do	16,448	0.22%

Figure 2. Most common trigger words used with voice search (Castleman,2020)

2.3.5 Search intent

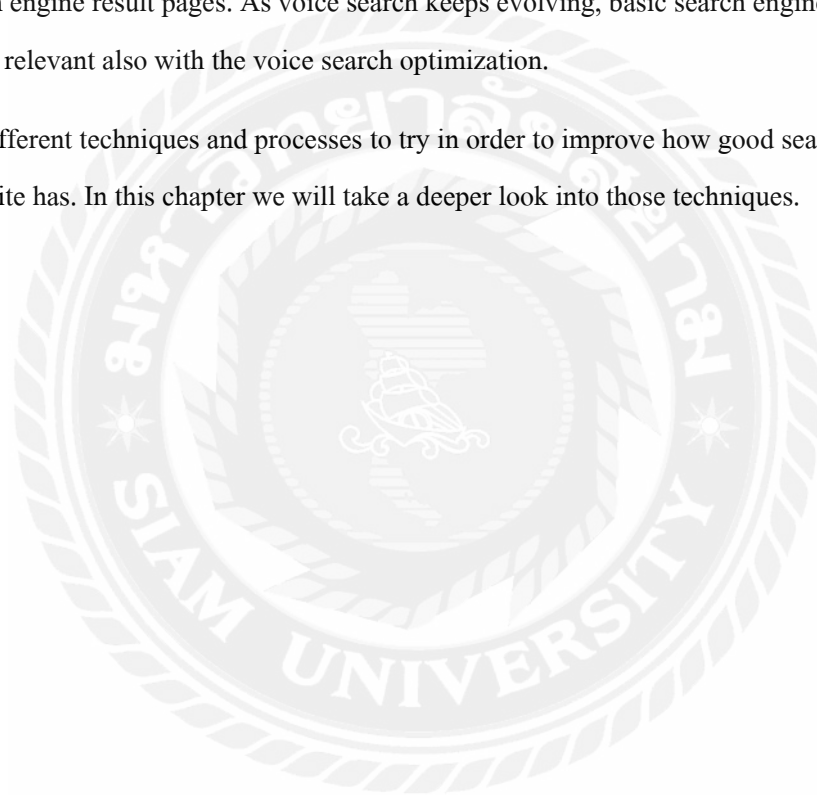
With voice search, people are simply looking for a quick and correct answer to their questions. As voice searches are usually longer and are in a question form, they clearly reveal the level of buyer intent the given person has. As a website owner, it is crucial to notice these valuable search queries and optimize the relevant website content accordingly. Most of the voice search users are looking for instantaneous results. As most of the voice searches are related to finding directions, looking for a place to eat, and looking for specific information, meaning that people who are performing voice search queries have a clear intent on their mind on what they are going to do, and the people often want instant results. For example, users who are searching for “Thai restaurants near me” want instant results in a form of reviews from other people, opening hours, and contact information of the restaurant. People performing search query like in the example given above are very likely going to book a table immediately.

Once again, it is important to use natural language in these situations. The better the keywords are matching with the potential customers voice search, the higher you will rank in SERP (Goulart, 2020).

3. Findings

It is important to keep in mind that optimizing websites for voice search is similar as traditional website optimization. It is impossible to optimize websites for only voice searches. There are things and techniques website owners can implement in order to increase their chances of showing up on search engine results pages, but just doing these things alone does not automatically mean that the website will actually get better rankings on search engine result pages. As voice search keeps evolving, basic search engine optimization techniques remain relevant also with the voice search optimization.

There are many different techniques and processes to try in order to improve how good search engine result page ranking the site has. In this chapter we will take a deeper look into those techniques.



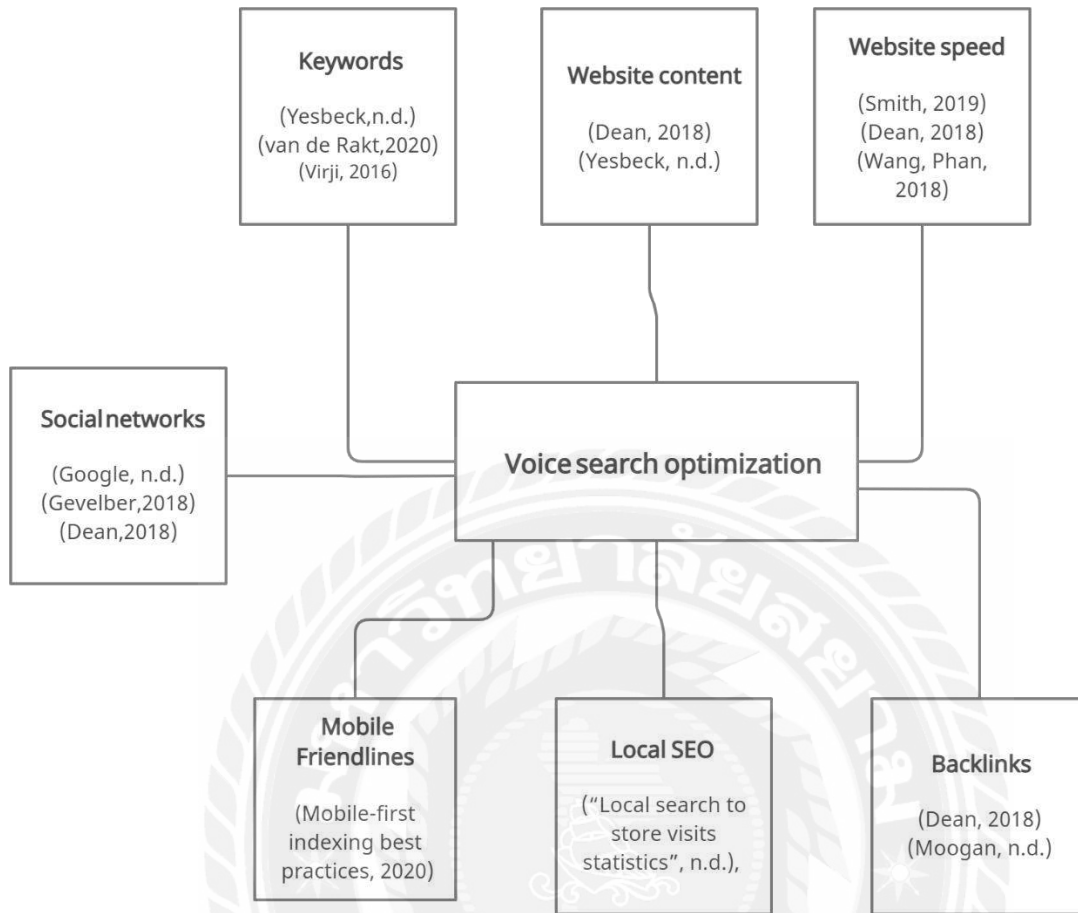


Figure 3. Established Network

3.1 Website Content

3.1.1 Content quality, length, and tone

One of the most important aspect of on-page SEO is the website content itself. Content can be considered being almost anything that is hosted inside a website. It can be text, images, videos, audio, or combination of these (What Is Website Content? And How Do You Create Effective Content? n.d.).

In this section, this research paper will take a closer look on the content which is in a form of text. According to a comprehensive study made by Backlinko.com an average word count of a voice search results page is around 2300 words in length (Dean 2018). Based on this information, it seems highly likely that Google prefers to give high SERP rankings to websites which have relatively rich content as measured in content length.

Creating content that talks back is a strong technique in order to improve the overall content quality.

According to Dean (2018), average voice search result is written in a level that 14-year old people are able to understand it. The content that is written in a way which uses conversational tone, is easy to understand for the reader and it helps to better answer the customers questions. Usually the users are performing searches looking for information about the products or services to understand them better. Overly complicated content is going to make things worse from a customer's point of view. Keeping the focus on mobile-friendliness and trying to inspire curiosity in the prospect customers is the key to provide useful and helpful content. The content has to be appealing in both text-based and voice-based search queries. It is also crucial to make sure that the content is valuable for the target audience and that it would satisfy the user. Google's search engine algorithms are highly valuing informative and valuable content, thus increasing the websites chances of appearing in higher SERP.

3.1.2 Keywords

When people are performing voice searches, they are not using similar language that they use when performing traditional searches. The format for voice search queries are performed more in a natural and conversational tones and the queries are longer. For the longer search queries, a long-tail keyword optimization is needed. Long-tail keywords are phrases which are more specific and more longer than the short-tail keywords. Usually long-tail keywords also have lower volumes of searches, but they also have higher conversion value as they are more specific and reveal the user intent more clearly (van de Rakt, 2020). As of today, long-tail keywords are not having high search volumes, but voice search is changing the search query length trends and based on that information alone, it is highly possible that long-tail keywords will gain a lot of traction in the coming years (Virji, 2016). Even if that would happen, short-tail keywords will most likely never disappear, but the natural phrases used in voice search will make targeting long-tail keywords more relevant than focusing on the simple, short-tail keywords.

The search engine optimization in general is moving towards providing higher quality, more natural, and more helpful answers for the user. This would mean that there will be higher importance on placing more emphasis on optimizing the whole content, not just the keywords alone (McCoy, 2018).

3.2 Website mobile friendliness and loading speed

3.2.1 Mobile friendliness

Since most of the voice searches are performed by smartphones, meaning that the websites need to be optimized for the smartphone users. Mobile friendliness is the process of making sure that website visitors who access the site from mobile devices, will have an online experience optimized for their device. In short, mobile friendliness usually means that a website is using responsive layout, which can adapt to different screen sizes and it is optimized being small in size, having well structured sitemap, and mobile-friendly site design (Crewe, 2018). Google has stated by themselves, that starting from September 2020, they have switched into mobile-first indexing for all websites (Mueller, 2020). Mobile-first indexing makes it very important to have a well responsive website for mobile devices as mobile-first indexing takes the mobile friendliness into consideration when determining the search engine results page rankings. Google has made it obvious that they are highly favoring the mobile search over the desktop search as a ranking factor.

3.2.2 Page speed

Majority of world's websites load slower than 2 seconds and based on a study how page speeds affect conversion rates, every additional second in loading time can lower the conversion rates up to 7%. The same study found out that if a given website takes five seconds to load, a whopping 37% of visitors will leave the site (Smith, 2019).

Voice search is used mostly on mobile devices, which means that websites should be mobile-optimized. Page speed is one of the biggest factors in voice search SEO. The average page shown in top SERP positions will load more than 50% faster compared to average pages (Dean, 2018). Typical Time to First Byte (TTFB) of a voice search is 0.54 seconds, which can be considered very fast as the worldwide TTFB average is 2.1 seconds. In conclusion, voice search results load dramatically faster than the majority of other websites. Google's has even stated by themselves that since July 2018, page speed is considered as a ranking factor especially in mobile searches (Wang & Phan, 2018).

3.3 Social signals

Social signals are website's combined activities that include shares, likes, reviews, and general social media visibility and engagement as how search engines perceive it (Zarudnyi, 2018). A study by backlinko.com found out that majority of the voice search results are having high volumes of social media engagement

(Dean, 2018). Google itself has stated that they are not using social signals as a ranking factor (Google Search Central, 2014). However, many studies, such as a studies performed by Optinmonster and Cognitiveseo disagree with Google’s statement based on their own tests and analyses (Hall, 2019; Cozmiuc, n.d).

3.4 Local SEO

Local SEO refers to the strategy of optimizing business’ online presence in a way to attract more potential customers from the relevant local searches.

3.4.1 Content-based local SEO

Based on Googles own report, 88% of local mobile searches lead into a store visit within one week’s time (“Local search to store visits statistics”, n.d.). The same report also claims that 8% of the searches looking for something nearby will result in a purchase. This is important statistic for business owners who own a physical storefront. Local SEO in aspects of content mainly focuses on using long-tail keywords in the content, which include geographic indicators. Good example of localized keyword which could be used for voice search optimization could be “coffee shop in Bangkok” or even more targeted long-tail keyword such as “coffee shop in Phetkasem road” As big share of voice search queries are based on local searches, it is important aspect to focus a lot of efforts into local keyword research and further optimizing the current content for local keywords in order to attract as many local customers as possible.

Google’s search engine algorithms are continuously getting smarter, meaning that the website content needs to be written better than ever.

3.4.2 Google My Business (GMB) listing

According to Google, “Google My Business is a free and easy-to-use tool for businesses and organizations to manage their online presence across Google, including Search and Maps. To help customers find your business, and to tell them your story, you can verify your business and edit your business information.” (Google, n.d.)

People who use voice search to search for local services and products are on the rise. According to Google’s own reports, searches about “near me” businesses have been increasing dramatically within the last few years (Gevlber, 2018). 80% of the consumers use searches in order to find local information (Smith,K., 2020). That would mean that businesses which are not properly interacting with local SEO, could be missing out on huge userbase of potential of customers.

GMB is great opportunity when optimizing for voice search and it is considered to be a cornerstone of local SEO, and yet 56% of businesses have not claimed their Google My Business listing, which leaves a lot of advantage to those business owners who are willing to optimize their GMB listing (Hardwick, 2018). Many of the voice searches are local searches, which means that the customers located in the area near the given product or service will find the business easier, if the given business has taken part in local search engine optimization. As majority of voice searches are local searches, it makes a lot of sense to list the business on Google My business. If the business is not listen on GMB, it will be way harder for users to find that given business on search results.

3.5 Link building

Link building is the search engine optimization process of obtaining hyperlink from other websites to a given website in order to give a boost for the website ranking on search engine results. In short, it is a known fact that when comparing two equal websites, the amount and quality of backlinks pointing to a page will make the difference in which of these two sites will be ranking higher (Moogan, n.d.).

In both traditional and voice search SEO, the backlinks are laying down a strong foundation for Google's search engine algorithm (Moogan, n.d.). Websites with strong Domain Authority (DA) are more likely to rank better in voice search SERPS than the websites with low DA metrics. According to Backlinko.com, the average Domain Rating (DR) of a website on a voice search result was 76.8 (Dean, 2018). For example, the DR of www.lazada.co.th is 83. With this information, it is safe to conclude that the average voice search result of DR 76.8 is extremely high. Websites with high DR like these can be considered of being very authoritative websites. Google wants to provide their users with as accurate answer as possible, which is why Google trusts the highly authoritative websites over the lower rated ones. Link building is not directly related with voice search optimization, and it should rather be implemented within basic SEO strategy.

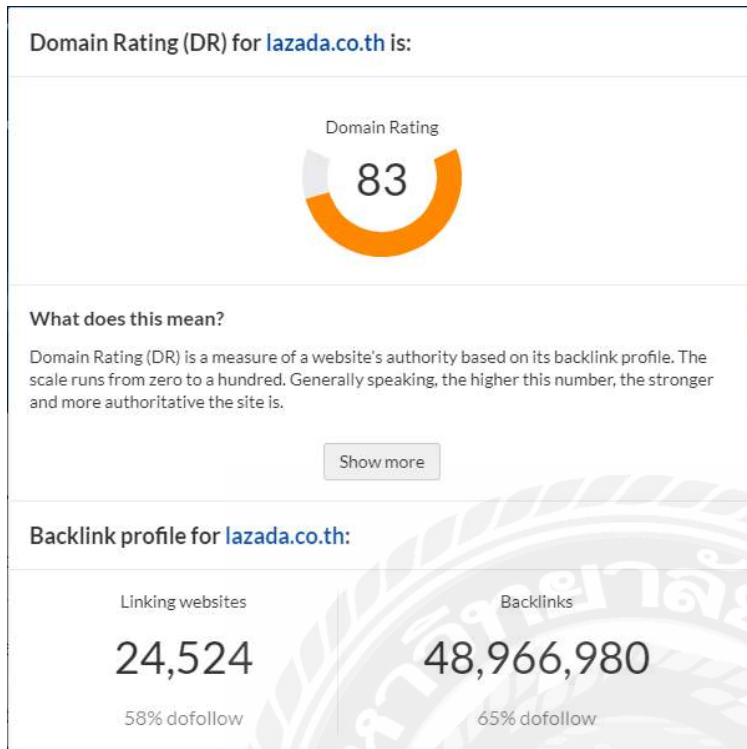


Figure 4. Domain Rating for lazada.co.th (ahrefs.com)

4. Recommendations

Optimization for voice search is not a complex or time-consuming process. If there is already an SEO strategy implemented in a given website, the optimization requires only a few minor improvements and tweaks.

Almost every technique used to optimize websites for voice search will most likely be beneficial to the website's optimization, it is definitely smart move to start focusing on voice optimization. Implementing voice search optimization techniques will help ensuring the voice search readiness is already in place when the trend will hit hard.

With the recent changes around search behavior and the usage of long-tail search queries, it is expected that features mentioned in this research paper will become useful in order to gain meaningful positions in both traditional text- and voice searches.

4.1 Recommendation for restructuring and improving the website content and keywords

Voice search is more conversational compared to traditional searched typed in with a keyboard. Website owners need to go through their content and analyze it. The main goal of the content analyze and rewriting

should be to include questions and answers, and especially questions and answers based on a long-tail keywords, in order to improve the website content for voice searches.

Instead of trying to optimize the content for search engines, optimize it for the users. Prioritizing the relevance over keywords is crucial, as relevant content is among the most important aspect of the search engine optimization in general (Yesbeck, n.d.). Google's search engine algorithms want to offer most relevant results to their users.

When optimizing for voice search, it is recommended to include keywords in a conversational tone. When targeting long-tail keywords for voice search, it is important to think about how people are speaking and how they would be asking a question. If possible, a smart move would be to perform company's customer service audit, finding out what kind of questions customers are often asking from the customer service agents, and creating content pages allocating for the longer and conversational-toned terms while answering to the customer's frequently asked questions.

4.2 Recommendation for improving mobile friendliness and loading times

People are often using voice search on their mobile phone in order to perform search queries. As most of the voice searches are performed by a mobile device, it should be a clear target for the websites for being mobile friendly with a responsive and easy to use layout. Search engines have already switched into prioritizing mobile-friendly websites, and it will remain to be seen if some day search engines will switch into prioritizing voice-friendly websites (Mobile-first indexing best practices, 2020).

In order to increase website's page speed, website owners can impellent improvements such as, using CDN (content delivery network), choosing a hosting provider with fast servers, optimizing images on the website, and using website caching.

Google's voice search prefers websites, which have quick loading times. This means that website owners have to make sure that everything on their website is fully optimized for fast page speeds.

By improving the loading times of the website, it is possible to outperform many of the competition.

4.3 Recommendation for using local SEO techniques and Google My Business listing

Add location pages to the website. Location pages should provide users with information such as business name, address, phone number, store opening hours and brief general information about the facilities.

Targeting and optimizing for local long-tail keywords is also an easy way of boosting the visibility on voice search results.

Setting up the Google My Business profile for a business is a sure way for improving the voice search visibility on search engine results. The great thing about GMB is the fact that it is free to sign up and to use.

4.4 Recommendation for link building and social signals

Social signals are debated metric in SEO community. Google has rolled a statement commenting they are not using social signals as a ranking factor, but many studies disagree with Google. Whatever the reality is, it is smart strategy to spend time on planning and creating content which will make people to react and share the content on social media platforms. There is absolutely no harm in doing so, even if Google actually does not consider social signals as a ranking factor, as highly interesting and engaging social media content will drive customers into visiting the businesses websites and therefore at least contributing to a brand awareness, if not into buying the products or services itself.

4.5 Recommendation for following the latest news and guidelines from major search engines

Voice search market is still growing and dramatically changing constantly. It is important to stay at the top of the latest news and guidelines what major search engines are laying out. This way it is always easy to adapt and implement whatever changes there will be.

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