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Are You Local (SEO)? Understanding The Challenges Of Local SEO Strategies.

(Pre-Publication Version)

Abstract

Local search engine optimization (SEO) can be a powerful strategy for small to medium sized enterprises. Limited studies provide information on these strategies. This study seeks to understand specialist SEO agencies approaches to performing it, and the associated challenges which emerge in the process. Semi-structured interviews with key informants revealed a range of practical approaches. Challenges identified include the influence of recent search engine algorithm updates resulting in fluctuating ranking factors, as well as the importance of mobile to enacting a local SEO strategy. A better understanding of the nuances of local SEO strategies is provided that can assist and inform industry and future scholars.

Keywords:

Search engine marketing; SEO; digital marketing; campaign strategy; algorithm updates.

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Introduction

Since the earliest manifestations of search engine optimization (SEO), the consistent challenge is to remain relevant within search engine results pages (SERP). For small to medium sized businesses, maintaining a high-ranking position within SERPs is imperative to enhance revenue and reputation. In contrast to larger firms with large budgets, search agencies frequently optimize small businesses' digital presences for localized results, referred to in the industry anecdotally as 'local SEO'. A litany of industry and academic research offers advice on the subject of SEO techniques and their effects¹, however very few studies provide information on local SEO. Hence, this article sheds light on the phenomenon, offering insights into its application as well as identifying the barriers faced by industry experts.

Background

When exploring the potential implications that SEO can have for online presences, it is important to understand the process behind SERPs. Briefly, when a user employs a search engine for information retrieval, it responds to a query inputted by the searcher, and in turns displays relevant results to that query in the SERP². Whilst acknowledging the relevance of Bing other search engines, it is important to note that the primary focus of this study is Google's search engine platform which is the market leader and therefore a key area where SEO specialists operate.

The Google 'PageRank' algorithm provides the basis for which all websites that are indexed are ranked. By 'crawling' websites and analysing ranking factors within each website that the algorithm specifies, results are displayed in order of relevance³. However, the ranking factors that the PageRank algorithm is analysing are subject to constant change. By using SEO, webmasters decipher appropriate techniques and

best practices to develop their websites favourably toward the ranking factors⁴. Such techniques are particularly relevant for small business owners, who must apply SEO in order to stay relevant in a competitive online environment. As the complexity of the PageRank algorithm develops, SEO professionals must therefore be aware of the implications an algorithm update may have on their client SERP performance⁵. Moreover, the importance of changes to PageRank highlights the necessity to investigate post-update best practice and provide a basis for which strategic contingency plans are formulated.

Local SEO

Mena ^{6, p.25} claims that “65% of all Google searches contain a local reference”, therefore the implications of an algorithm update relating to local SEO can affect the manner in which consumers can discover a business online. Sutton⁷ explored the effects of a local SEO campaign on a regional medical office conducted by a team of in-house search engine marketers saw impressive growth in revenue (333% year-on-year). Importantly, the study confirms both the priority of geo-targeted keywords and the importance of optimising websites based on the search results that want to be achieved. Furthermore, it highlights the importance of local SEO strategy in order to achieve an outcome that can dramatically improve the online visibility of a small to medium sized business.

Another aspect of local SEO that allows businesses to be discovered is the integration of standard search results pages with Googles' API's, particularly the Google Maps API in relation to local SEO⁸. The Google Maps API allows websites to display maps, location data, directions, and location targeted data to their visitors. Since the Google 'Local/Maps' update of 2005, draggable maps and integrated location data have

become a feature of Google's search result pages⁹. Since the integration of maps with local search, Google have developed the accuracy of geolocation in searches, and have been able to display accurate, location-based results on long-tail (less popular) search terms.

The increase in accuracy of local search results means that businesses have to accommodate for a wider array of potential searches. Previously, results would have only been displayed on specific searches; now vague and ambiguous searches with a local keyword display the competing results. Additionally, the introduction of HTML5 meant that websites and web users could interact with the 'Geolocation API'. Location services, particularly in relation to mobile search, were now much more accurate in pinpointing a users' location and displaying search results based on the search query and location of the user.

Another study identified that search statistics demonstrate very reliable and common search patterns for local-based searches¹⁰. Consequently, three patterns of high volume, local search keywords were derived. The most popular was product/service description followed by city name, followed by city name followed by product/service description. Lastly, the least popular pattern was product/service description followed by city name and abbreviation of state/city. Considering this hierarchy of local search patterns, David's ¹¹ findings underline the importance of SEO keyword research which considers localised approaches to SEO.

On the other hand, no SEO strategy is not without its challenges. Periodic updates mean reordering of priorities, such as link structure and content ranking. This state of constant change that both web developers and search engine marketers face highlight the importance of an SEO strategy with the capacity to adjust to a volatile

environment¹². Furthermore, the expansion of search engine capabilities has led to a growth of paid advertisements and additional 'paid' search platforms, such as pay-per-click (PPC) and Google AdSense. Xing and Lin¹³ found that while PPC offers an advantage to SEO firms via short term profits, they are not sustainable when managing large clients due to advertising costs. Whereas, organic search services offer a higher return to the SEO firm through consistent pricing and are a trusted alternative to paid strategies. Hence, the high rate of life and death of a website can be related to the form of digital marketing the web master chooses to apply to their website. Whilst, PPC offers short term profits to search engine marketers because the webmasters are only looking for short term profits, therefore SEO strategies are beneficial for both the search engine marketer and the webmaster in achieving long term goals and ensuring a continued relevance and long life of a website. A drop in organic link quality may lead a business or an SEO specialist to suggest a PPC campaign in favour of a time consuming, organic SEO campaign. However, it is widely accepted that search engine users prefer to click organic links over paid/sponsored links, suggesting a considered approach to sponsored results is required.

SEO Technology and Updates

To build a website and using effective SEO, can be challenging. Platforms such as 'WordPress' and Google's own 'Blogger' offer content management systems (CMS) that allow users to generate desktop and mobile-friendly websites¹⁴. The most popular CMS is WordPress, which offers both free and paid-for tools that assist webmasters in achieving their online goals. The rise in popularity of CMS systems has resulted in an increase in demand for SEO tools, and technology to assist webmasters in carrying out their SEO strategies¹⁵. A major advantage of modern CMS plugins for SEO is the

ease in which SEO processes can be computer generated. For example, 'XML sitemaps' aim to provide search engines with the ability to rapidly crawl and index websites. Modern CMS systems automatically generate XML sitemaps, again assisting novice webmasters in their SEO efforts. However, as Jerkovic¹⁶ states, no auto-generated sitemap is perfect, underpinning the need for an SEO framework and basic knowledge that all webmasters must have when implementing an SEO strategy. Whereas, Qiu¹⁷ found SEO plugins to be useful analysing tools for successful SEO. Regardless, automated SEO systems still require user to have a basic knowledge of SEO to optimise the website.

However, PageRank updates affect SERPs across all platforms. In 2015, Google first announced the mobile-friendliness of a website as a ranking factor¹⁸, highlighting the importance of a mobile optimised website along with a mobile SEO strategy to webmasters that may be focusing all of their efforts on desktop platforms. Additionally, the integration of cross-platform devices means that webmasters can optimise Google's extensive API library, in a bid to appeal to users of all devices. According to Svennerberg¹⁹, 43% of all API's use Google Maps. Whilst not only highlighting Google's significance in the API arena, this statistic highlights the popularity of localised data for both webmasters and users.

Whilst there are several 'major' PageRank updates each year, those that are primarily focused on local SEO occur (on average) every two years. Following the 'Universal' search update of 2007 and the introduction of Google 'Places' in 2010, major local SEO updates now focus heavily on the integration of local search data within the search engine results pages²⁰. The Venice update of 2012 set the standard for the way in which local search operates. By factoring users IP address in a query, the

Venice update allows Google to return '*highly relevant and personalised results to the user*'²¹. The history of the major local updates signifies the importance of personalised user results. The implications of the Venice update means that webmasters must take into account the often-ambiguous approach in which users are querying Google.

For a novice webmaster, it can be easy to pick one of many approaches available through Google as a local SEO strategy (such as listing a business through Google MyBusiness). Whilst this approach may appear to be an efficient method of gaining a listing within the SERP's, the implications of operating a singular approach to SEO can be damaging. A study by ComScore²² surveyed 5000 individuals who had conducted a local business search within the last 12 months. They found that 25% of searchers overlooked Google Maps in search results, and chose to focus on the information within the website provided through their search. In another noteworthy update, the 'Penguin' update of 2012 confirmed the ranking priority given to quality content, resulting in 3% of global websites implementing manipulative content techniques being negatively affected by the update²³. Weiche²⁴ found that the 'Pigeon' update restricted the integration of map results depending on the search query. Although there are many other factors such as user location and IP address, the findings of the research suggest that local businesses cannot solely rely on a Google MyBusiness profile, as localised maps are no longer displayed with every 'localised' search query. Subhani²⁵ p.13 substantiates these findings, stating that the Penguin update "impacted 3.1% of the total search queries in Google". Gabe²⁶ analysed 13 websites on their ranking positions, post-penguin update. He found that the websites that experienced the largest drop in rankings had 'questionable' link quality. This includes potential spam, and inbound links from 'untrustworthy' sources. The implications of the penguin update meant that websites using dubious strategies were severely penalised. With the

'Pigeon' update, Google claimed to have created 'closer ties between the local algorithm and core algorithms'²⁷. The claim of 'creating closer ties' highlights to webmasters that they must be aware of both local and core algorithm updates in the future, suggesting an ongoing implementation of Google's features within SERPs. Finally, the timeline in Figure 1 maps the increase in complexity of PageRank algorithm at each update between 2000-2015. By implementing features such as user location and social media, the PageRank algorithm must factor in the variety of search methods that are available to users, and anticipate their queries to display relevant results. Since 2017, it is worth noting that subsequent updates have been rolled out, such as the Fred, Macabee and Florida updates²⁸. However, these were after the data collection period of this study and were not included in Figure 1.

< Insert Figure 1 About Here >

In summary, it is clear that many studies have been conducted in the area of search engine marketing, however few address the implications specifically in relation to local business owners use of local SEO. In doing so, two key areas which require more investigation by this research: *the evolution of local SEO, and the impact of search engine updates on local SEO.*

Method

This study seeks to investigate local SEO amongst industry experts who provide business owners SEO services. Participants were asked to recount the influence of local SEO updates on their client websites. As such semi-structured interviews were conducted in order to collect expert opinions within the SEO industry. Due to SEO being a highly specified area in the digital marketing sector, a purposive sampling procedure was used to identify twenty industry professionals who were in a position to

provide insights. Sharma²⁹ recommends purposive sampling when researching a specific subject, as it provides the best available knowledge concerning the sample subject. After the target group was established, individuals that fit the sample criteria were selected, approached, and scheduled for interview. In doing so, current practice of search engine marketers in relation to Google's major algorithm updates was investigated. Data collection also gathered opinions on local SEO. Specifically, participants were encouraged to explain how client SERP performance were affected by algorithm updates.

Thematic analysis of interview transcripts used coding to simplify the data, establishing meaning, identifying patterns and developing concepts³⁰. Within the transcripts of the research, coding is utilised to identify key words and recurring phrases to identify trends within the data. The thematic analysis process allows for a deeper analysis of the interview data, with a particular emphasis on comparing and contrasting data between interviewees. Additionally, data analysis established the foundations for a conceptual framework of local SEO as presented in the findings.

Findings

Thematic analysis of findings revealed the following themes which were most pertinent to performing local SEO: webmaster guidelines, mobile SEO, algorithm updates, and ranking factors.

Webmaster Guidelines

This theme is centred around the substantial importance that all participants place on researching, and adhering to, Google's Webmaster Guidelines. When asked specifically about contingency plans in relation to algorithm updates, participants

directly referred to the quality of the overall website, in terms of how the website and the websites' content adhered to Google's Guidelines.

P.6: *"We do not stray too close to the fine line between Google's guidelines and unsavoury SEO. The more you work towards the factors that Google are looking for (great user experience, engaging content, quality natural links), the major updates shouldn't have a massive impact."*

P.4: *"We make sure that everything we do follows Google's guidelines."*

Additionally, all participants indicated that, rather than having a set contingency plan when reacting to an algorithm update, their approach involved consistently adhering to Google's Webmaster Guidelines in the assumption that complying with such advice will result in a reduction of penalties once an update is released.

P.3: *"There is no set way of planning for it, you just have to do the right thing initially. But hey, that's SEO!"*

P.5: *"You hope that what you're doing is enough that your sites aren't going to be massively impacted."*

P1: *"Try and adhere to the webmaster guidelines as much as you can."*

However, there is a split between participants in what they perceive as the cause of the penalty. Whilst it is popular opinion from the research that penalties relate directly to not adhering to Google's Webmaster Guidelines, participants believe that penalties are occurring either from unsavoury SEO in the past, or the use of 'black hat' SEO techniques that are currently being used to manipulate search engines.

P1: *“For example, with Penguin, everyone went down the guest posting route because there was an agreement that the webmaster let the user post a link. Within a month, guest posts were seen as unnatural links and people were getting penalized for something they thought as within the boundaries of the guidelines. “*

P2: *“It could be something like duplicate content, or maybe they’ve just been a bit daft with several location pages with duplicate content. People try to take the shortcut, but only if you put the effort in will you be rewarded. We also check backlink profiles too.”*

P.7: *“It tends to be a case of something in the distant past, such as link stuffing, which you may have been able to get away with in the past but now means you’ve been hit for it.”*

It is clear that Googles’ Webmaster Guidelines form the contingent approach to dealing with algorithm updates. Participants have made an overwhelmingly strong case against specific, rigid and pre-set contingency plans. It is clear than an ongoing approach to website analysis that is in accordance with Googles’ Guidelines being the favoured approach.

Mobile SEO

Mobile SEO featured heavily in participants accounts, as well as the effects of specific major local algorithm updates. In addition, all participants stated that the future of local SEO will specifically be centred around mobile platforms, utilising mobile technology to integrate local SEO with mobile search.

P.7: *"I suspect that, given the current trends, 80-90% of searches in the next decade will be conducted on mobile or tablet devices."*

P.1: *"Mobile usage and location will also grow in popularity."*

Among the popular opinion of mobile search as the future of local SEO, many participants additionally viewed paid search as an important component in the future of local SEO, linking the tracking capabilities of modern technology which would allow Google to attribute offline business visits and transactions to a paid click.

P.6: *"Google is also testing call tracking, to attribute calls and in-store visit as a PPC click."*

P.4: *"More and more, Google knows where you are, especially due to the popularity of mobile search and GPS tracking on mobile devices. Google knows where I am twenty-four seven. So, Google knowing where you are is going to be in the future, is a massive thing."*

Many participants also indicated the shift towards Google gaining a greater understanding of the context behind a search term. Again, this was in reference to mobile search, and mobile users searching for specific local terms 'on the go'.

P.1: *"I think it's going to be based around Google gaining a better understanding around the context of what people are searching for."*

P.7: *"In a local search point of view, I would expect to see a much more structured way of Google understanding the context of a mobile search query."*

The key theme of Mobile SEO highlights the shift in technology and context that Google will work towards in the future. By assessing the data, a trend starts to emerge

where the complexity of a search term (in terms of context-based search terms) increases as mobile usage grows in popularity.

Algorithm Updates

It was also evident that participants considered algorithm updates as a large part of their role as SEO professionals. Participants recognized how sporadic, frequent algorithm updates destabilized local SEO strategies.

P.3: "For our agency in particular, Penguin was a game changer."

P.5: "It's taken a while to really get to grips with the level of change that will need to happen to fully recover from the update." "Probably Panda. Well... Panda and Penguin are quite close in that respect."

P.8: "The Florida update of 2004 wiped out two-thirds of our traffic, as that was solely how we earned our money. It was a bit of a shock at the time, but that is search. It was pretty much overnight."

Additionally, when asked specifically about the impact of local SEO updates, participants noted that local SEO recovery tends to be much more difficult (in comparison to overall major updates), due to the unsavoury SEO history that is attributed to many small business websites.

P.1: "It is a bit more difficult with local SEO, it may not be possible to come back if you're using a spam technique to rank locally."

P.8: "It's a long, tedious process, but you're making sure that the information for each locality is correct. You then have to look at the link equity of each store, and check to see if local media mentions the brand, or specifically, the store."

The influence of Algorithm Updates illustrates how search engine marketers operate in a highly unstable environment. Furthermore, participants' responses clearly indicate the difficulty they face with responding to updates as well as educating the client on how to rectify unsavoury SEO.

Ranking Factors

This final theme is evident throughout all responses from participants, particularly with questions related to the effects of algorithm updates. Whilst we assume the participants will respond by directly stating specific ranking factors (particularly in relation to algorithm updates), the frequency in which the same ranking factors occur shows that search engine marketers place a significance on certain ranking factors than they do to others.

P.17: "The more you work towards the factors that Google are looking for (great user experience, engaging content, quality natural links), the major updates shouldn't have a massive impact."

P.3: "The Penguin update flipped SEO on its head and moved everyone towards producing proper websites and content."

P.11: "Post-Penguin, it's made us marketers. We can't just throw mud at the wall, we actually need to add value to campaigns and produce content that people actually want to read."

When asked about how specific local SEO algorithm updates effected their local SEO clients, many participants recognised that Google values readable content, and

penalises duplicate content. Additionally, responses within the data conveys a trend of context-led search, suggesting future local updates will be based on gaining a greater understanding around the context on which a search is being performed. Most notably, the 'Schema' markup tool for local business websites provides Google the context of a search, and positively influence other local ranking factors such as Google Maps, Business Citations and location-based content.

P.12: "Google knows our location, and if I did a local search, I would expect to see results from around my location. We use Schema to mark-up the code, so that Google knows where our clients are based. Without Schema, Google doesn't necessarily understand the context of the text in the web page."

P.4: "Local SEO is now a lot more targeted towards rich snippets, and getting your business listed with citations. So, we've seen a shift from using things like location-based landing pages, toward local case studies, rich snippet mark-ups and local content."

The majority of participants were aware of the minimal impact that the 'Pigeon' update had on toward their local SEO clients. When asked specifically about the update, participants took the opportunity to directly refer to local ranking factors which they felt Pigeon confirmed were quality ranking factors. Additionally, participants named other local SEO updates that they felt had been much more severe than Pigeon, and instead would tend to attribute Pigeon toward a shift in citation quality rather than an update that purposely sought to aggressively penalise business websites.

P.14: "We didn't really see any overall effect from Pigeon."

P.18: *“I guess Pigeon was born from the Hummingbird update and was bringing Hummingbird to local SEO. It was about getting businesses to be seen as an object and to enable the algorithms to understand what the business was.”*

The consistent reference to mobile-led SEO again displays how the participants consider the future of local SEO. Through the key themes identified from the data, it is evident that local SEO is reliant on high quality content and shows the barriers of context and unsavoury SEO that search engine marketers face when attempting to successfully implement local SEO. The key themes also vindicate the assumption that search engine marketers face regular challenges in attempting to deal with the volatile SEO landscape, which can explain the reason that no participants claimed to have a set contingency plan for dealing with potential updates because they don't know how to plan against an update they have no information about.

Discussion of Findings

The results highlight the challenges search engine marketers face when reacting to major algorithm updates and implementing local SEO strategies. It was particularly evident within the data that search engine marketers hold a general consensus in which ranking factors effect ranking results both positively and negatively. Additionally, the data highlights the overwhelming shift towards mobile search, particularly in reference to local SEO and location tracking services.

Algorithm updates form a key part of any search engine marketers' role, both in understanding the implications of an algorithm update, and having the ability to successfully react to an update if penalties do occur. As evidenced by Figure 1, is it clear that the algorithm update participant stated as having the largest negative impact was Penguin, particularly in comparison to the other updates that were suggested by

the participants that occurred in the early 2000's. Moreover, whilst Penguin is the most commonly stated update, the majority of participants claim that major algorithm updates were significantly more 'severe' in the early 2000's, when SEO began to gain popularity. This suggests the researcher that all participants misunderstood the severity in which they could be penalised as updates rolled out more frequently, resulting in a false sense of security for search marketers and an eventual severe penalty for many of them when they were penalised for both current practices and unsavoury SEO that had been performed in the past. Therefore, the findings of this study support the research concerning the volatility of the SEO environment³¹⁻³³.

Previous literature has suggested that the 'Penguin' update was by far the most severe major algorithm update of modern SEO³⁴ and findings substantiate this claim, due to the majority of participants claiming Penguin as the algorithm update which proved to have the most severe effects on ranking results. Whilst the literature suggests that the Pigeon update had an effect on the ranking factor integration and on-page visibility³⁵,³⁶, when the participants were asked specifically about the effect of the Pigeon update on local SEO all participants claimed that Pigeon had little to no effect on their clients' ranking. Alternatively, some participants indicated that Pigeon was a positive update, as it educated the participants on the ranking factors they needed to focus. Furthermore, this update justified participants assumptions for successful local SEO techniques.

The theme of Google's webmaster guidelines is a key theme within this study. The research has misinterpreted the approach that search engine marketers have when reacting to algorithm updates, forming the assumption through the literature that search engine marketers would have a pre-set contingency plan in place that would

assist in reacting to the algorithm updates. Alternatively, all of the participants said they had no contingency plans in place, with 100% instead referencing Google's webmaster guidelines as a consistent contingency approach. Analysis of findings show overwhelmingly that the preferred approach to reacting to algorithm updates is to adhere to the webmaster guidelines. Participants stated that the ongoing contingency approach was much more effective than waiting for an update and attempting to deal with it as it happened. Again, these original findings highlight the temperamentality of the SEO environment, as well as establishing a gap in knowledge in the previous research in this field.

The overall consensus toward the future of local SEO was the continued shift toward Mobile SEO. With one participant claiming that 80% of all searches are done on a mobile device, and a 100% response rate related to mobile development, participants' responses extend the previous knowledge in this area³⁷⁻³⁹. Moreover, the data outlines the opinion that future local SEO will be mobile-led, with a focus on GPS tracking and the ability to attribute offline purchases, such as a PPC metric. Participants expressed cynicism in the practices of Google, noting the decrease in map results a ranking factor update attributed to the 'Penguin' update and the use of GPS tracking as an increase in methods to push paid search on webmasters.

Interestingly, participants referred to at least twice the amount of positive ranking factors than they did negative ranking factors. Table 1 rounds up the positive and negative ranking factors as mentioned in the interview transcripts. Whilst Gabe⁴⁰ generalises ranking factors as either positive (white hat) or negative (black hat), findings from this study also recognise commonalities between the factors (e.g., content). In terms of local SEO, participants referred to quality content, business pages

and citations as positive factors, as they provide search engines the context behind a search. This finding also underlines the participants' view that local SEO should be context-led, with future updates potentially rewarding websites that utilise ranking factors that assist in the search engines' understanding of the context of a search query.

< Insert Table 1 About Here >

Throughout the research it is clear that the future of local SEO will be based around context-led searches, conducted on a mobile platform. Whilst Comscore ⁴¹ highlight that the majority of search engine users prefer organic links to paid search, SEO professionals suggest a shift from local search to paid results. This may suggest that local SEO campaigns relying solely on organic search campaigns may have to adjust their strategies shift towards paid search. Lastly, participants highlighted the influence that unsavoury (black hat) SEO practices had on their current performance, such as severe penalties for poor quality links.

Conclusion

This study aims to understand local SEO and the challenges that search engine marketers face when performing it. Whilst the literature surrounding digital marketing and SEO is sufficient, there lacks a substantial amount of research in the specific area of local SEO. Hence this study contributes to knowledge of the area of local SEO through the following four areas. Firstly, it identifies the primary barrier to the success of search engine marketers are Googles' major algorithm updates. Particularly, the updates 'Penguin' and 'Panda' directly penalised local SEO malpractice, primarily attacking websites that employed unsavoury SEO techniques such as duplicate content, link stuffing (linking to high ranking sites which may not be relevant), and

spam links. SEO professionals also face the challenge of fixing historically unsavoury SEO techniques that are linked to their websites; if they are not located and fixed, Google will severely penalise the website.

Secondly, the study highlights how none of the participants claimed to use, or have ever used, a contingency plan when reacting to algorithm updates. Furthermore, all participants referred to Google's Webmaster Guidelines as a way of consistently staying within the parameters of 'white hat SEO'. The overall consensus was of playing it safe by adhering to the rules. The search engine marketers and webmasters understood the penalties that could occur if they strayed from the Webmaster Guidelines, and therefore chose not to take the risk. Thirdly, none of the participants found the 'Pigeon' update to have any effect on their websites. Contrary to the literature, participants even suggested that 'Pigeon' was a positive update, in that it confirmed that they were sticking to the Webmaster Guidelines and using the correct ranking techniques to deliver successful SEO campaigns. Lastly, the participants highlighted the significant rise in popularity of performing a search on a mobile device. The research adds to the popular research within the literature concerning the rise in mobile usage, with participants going on to forecast a trend of GPS tracking, offline PPC as future considerations for local SEO.

5.0 References:

1. Wilcox, G. B., Sussman, K. and Chung, A. (2018) 'Social media's return on investment in an integrated marketing campaign: Media mix modelling.' *Journal of Digital and Social Media Marketing*. 6(2) pp. 181–190.
2. Langville, A.M. and Meyer, C.D (2011) "*Google's PageRank and Beyond: The Science of Search Engine Rankings*" Princeton University Press
3. Google Algorithms (2018) "*Inside Search*" [Online] [Accessed 5th February 2019] Available: <https://www.google.co.uk/insidesearch/howsearchworks/index.html>
4. Perner, P. (2015) "*Machine Learning and Data Mining in Pattern Recognition*" Springer
5. Sponder, M. and Khan, G. F. (2017). *Digital Analytics for Marketing*. Routledge.
6. Mena, J. (2012) "*Machine-to-Machine Marketing (M3) via Anonymous Advertising Apps Anywhere Anytime (A5)* CRC Press – Taylor and Francis Group
7. Sutton, A.T. (2012) "*Local SEO: How geotargeting keywords brought 333% more revenue*" [Online] [Accessed 5th February 2019] Available: <http://www.marketingsherpa.com/article/case-study/how-geotargeting-keywords-brought-333>
8. Jacobson, D., Woods, D., and Brail, G. (2011) "*APIs: A strategy guide*" O'Reilly
9. GooglePress (2005) "*Google Merges Local and Maps Products*" [Online] [Accessed 5th February 2019] Available: http://googlepress.blogspot.co.uk/2005/10/google-merges-local-and-maps-products_06.html

10. David, M. (2015) *WordPress 3 Search Engine Optimization: Optimize your website for popularity with search engines* Packt Publishing
11. ibid
12. Ntoulas, A., Cho, J. and Olston, C. (2004) *What's new on the web? The evolution of the web from a search engine perspective* ACM New York
13. Xing, B. and Lin, Z. (2006) *The impact of search engine optimisation on online advertising market*, Conference on Electronic Commerce, New Brunswick, Canada, August 13-16
14. Roupp, H. (2015) *Teaching World History in the Twenty-first Century: A Resource Book* Routledge Taylor and Francis Group
15. Onishi, A. (2013) *Pro WordPress Theme Development* Apress
16. Jerkovic, J. (2010) *SEO Warrior: Essential techniques for increasing web visibility* O'Reilly
17. Qiu, Y. (2014) *CMS Website Search Engine Optimization* Bachelor Thesis, Lahti University of Applied Sciences
18. Enge. E., Spencer. S. and Stricchiola. J. (2015) *The art of SEO: Mastering Search Engine Optimisation* O'Reilly Media Inc.
19. Svennerberg, G. (2013) *Beginning Google Maps API 3* Apress
20. Varndell, D. (2014) *SEO 2014: Includes how to recover from Penguin, Panda or Manual Penalties* Lulu Press Inc.
21. ibid

22. Comscore (2015) *“Trends shaping Local Search in 2015”* [Online] [Accessed 5th February 2019] Available: <http://www.comscore.com/Insights/Events-and-Webinars/Webinar/2015/Trends-Shaping-Local-Search-in-2015>
23. Varndell, ref 20. above
24. Weiche, A. (2014) *“Designing Business Location Pages: Part One – Single Location Business”* [Online] [Accessed 5th February 2019] Available: <http://localu.org/blog/author/aweiche/page/2/>
25. Subhani, A. B. (2014) *“Intro to WWW Marketing”* Abbott Press
26. Gabe, G. (2013) *“Penguin 2.0 Initial Findings – A Deeper Update, but not broader [Analysis]”* [Online] [Accessed 5th February 2019] Available: <http://www.hmtweb.com/marketing-blog/penguin-2-initial-findings/>
27. WAGMob (2014) *“Learn SEO”* [Online] [Accessed 5th February 2019] Available: http://ebookshelf.net/learn-seo_ebook-download1555529
28. Search Engine Journal (2019) Google Algorithm Updates andamp; Changes: A Complete History. Search Engine Journal. [Online] [Accessed 5th February 2019] <https://www.searchenginejournal.com/google-algorithm-history/>.
29. Sharma, R. K. (1997) *“Sociological Methods and Techniques”* Atlantic Publishers
30. Saunders M., Lewis P. and Thornhill A. *Research Methods for Business Students*. Pearson Education; 2015.
31. Ntoulas, ref 12 above

32. Erdemir, A. S. (2015) 'Digital Pr in Turkey: How Turkish Brands Integrate Content Marketing, Social Media and Seo in Pr Campaigns.' Journal of Business and Behavioral Sciences, 27(2) p. 2015.
33. Wilcox, ref 1 above
34. Subhani, ref 25 above
35. Varndell, ref 20 above
36. Weiche, ref 24 above
37. Zicherman, K. (2012) *"10 reasons why your clients need a mobile website"*
Booktango
38. Comscore, ref 22 above
39. Erdemir, ref 32 above
40. Gabe, ref 26 above
41. Comscore, ref 22 above

Appendix/Tables

Figure 1 Timeline of SEO Development from 2000-2015

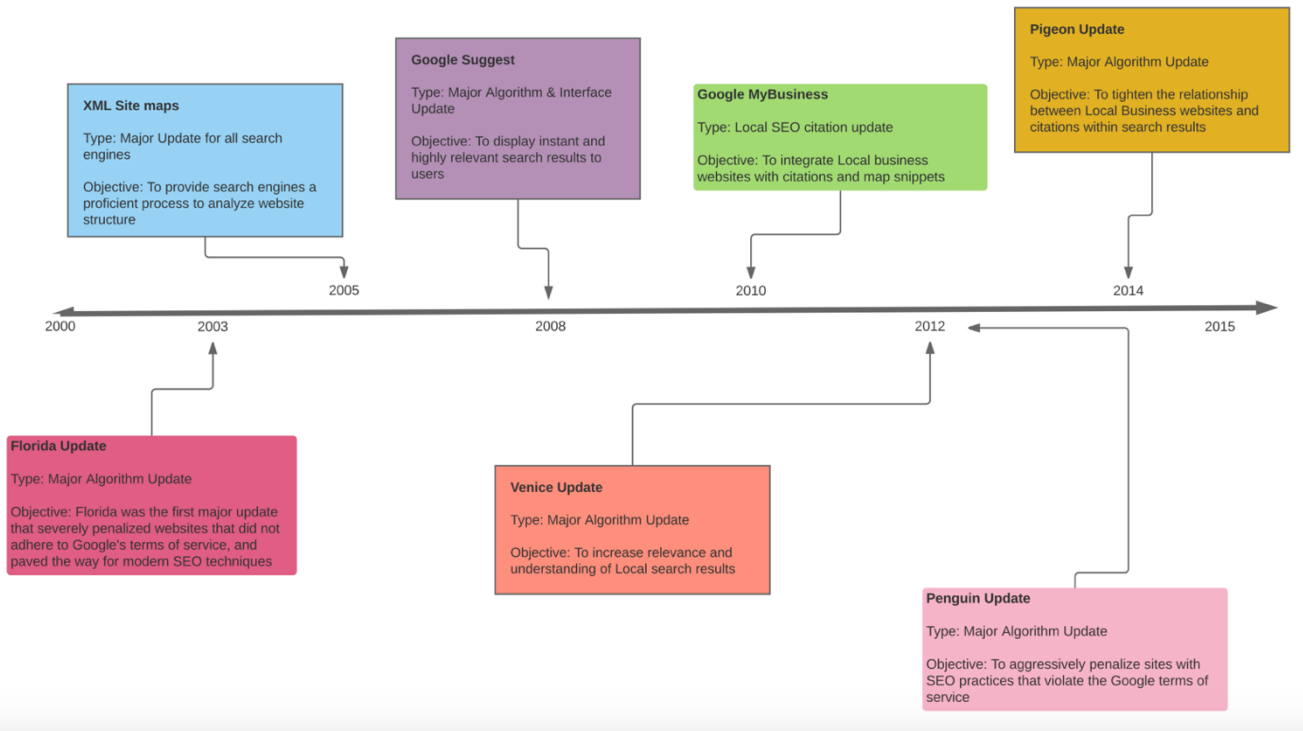


Table 1 Ranking Factors in Local SEO

	Positive	Negative
Ranking Factors	Quality Content	Spam Content
	User Experience	Duplicate Content
	Local Content	Spam Links
	Natural Links	Site Speed
	PPC	Link Stuffing
	Mobile Search	
	Google Maps (API)	
	Business Pages	
	Citations	
	Location Pages	
	Knowledge Graph	
	Rich Snippets	