



Analysis Of How Digital Marketing Affect By Voice Search

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Abstract

When it comes to iPhone applications, "SIRI" would be at the top of the list. Google Voice Assistant for Android phones would also not be far behind. For anything sold by Amazon, "Alexa" is the same. One thing unites all of these applications. They assist you by responding to your vocal requests; they are voice-based assistants. With the development of speech-to-text technology and the enhancement of device processing capabilities, voice-based assistants are now the preferred choice for the majority of routine tasks. There has been an increase in voice-based searches along with this shift in user behavior. These days, people use assistants to search the internet. The conventional method of searching by entering text into a browser to access a search engine has changed as a result of this. The search engine's delivery of search results is impacted by this modification. The manner that users access content is affected by changes in search engine processing. This affects the digital marketing strategies used by various websites to increase visitors, carry out branding initiatives, or run promotions.

Keywords:-Web, Digital Marketing, Voice Search, Voice Assistant, Internet Marketing, Digitalization.

1. Introduction

"By 2020, voice searches will account for half of all searches." ComScore.

People these days are constantly searching for a simple, quick fix that will increase the effectiveness of multitasking. Speech-to-text is therefore a great option. This option is particularly appealing to folks who dislike typing or find it inconvenient. Thanks to technological advancements and low error rates in speech to text conversion, voice-based search is revolutionizing internet search behavior. It makes sense for digital marketers to make sure their material is accessible from all forms of inquiries, including voice search, questions, queries, and so on, given the surge in the use of voice commands for searching. Websites that were previously optimized for text-based searching and search criteria would now need to be optimized for voice-based inquiries because people are starting to search in different ways than just typing.

The Technology of Virtual Assistants Powers Voice Search

Speech to text and voice-based search styles are becoming more and more popular due to the use of voice assistants on our phones, such as Siri or Google Assistant, and the growth of IOT, or the Internet of Things. The most popular personal voice help services available right now are Alexa from Amazon, Cortana from Microsoft, Siri from Apple Inc., and Google Voice Assistant.

Top4 VirtualAssistants

1. Siri(Apple)
2. GoogleNow(Google)
3. Alexa(Amazon)
4. Cortana(Microsoft)

Apple was the first major corporation to incorporate personal voice assistants into its phones. Siri is the name given by Apple to the personal assistant and voice search feature that company installed on its iPhones. Google also unveiled Google Now and its own personal speech assistant. Google Now is an app that uses clues from your everyday phone usage, browsing history, and location to provide you with the essential information even before you ask. Microsoft Windows 10 Operating System and Cortana, its new personal assistant, were just released. Amazon expanded their virtual assistant, Alexa, and Amazon Echo gadget further, taking it a step farther. Alexa responds to queries such as "Alexa, what will be the weather this week?" by utilizing your smartphone and respond to commands like "Alexa, reschedule my 10:00 am meeting."

This is mostly due to the unique characteristics of voice search and the difficulties it poses for websites designed for written searches.

The next stages to incorporating a successful strategy in light of the expansion of voice search are knowing what people

will be talking about, how they will be searching, and what they are looking for, with Google and Facebook AI and AI in general learning more about conversationalist speech.

2. Literature Review

Presently, the majority of voice-based search industry literature is accessible online, with a smaller quantity available through select journals and research papers.

How is it that the consumers a reusing voice based search?

Finding out how people use voice-based search is the most important thing to grasp about it. It has been crucial to stay up to date with the data around voice-based search as its popularity grows in order to be ready for any changes that may arise and how they may affect the business. The key statistics for voice-based searches are listed below.

1. More than 50% of teenagers and 41% of adults use voice-based search on a daily basis, according to Northstar Research, 2014. 2014's Northstar Research.
2. Every day, Google receives about 3.5 billion searches. Approximately one-third of the 3.5 billion queries are voice-based (Thee Design, 2017).
3. Among American smartphone users, 71% of those between the ages of 18 and 29; 59% of those between the ages of 30 and 43; 39% of those between the ages of 44 and 53; and 38% of those above the age of 53 use mobile personal assistants (Thrive Analytics, 2014).60% of the users who use mobile personal assistant are on the go when they use them. (*ThriveAnalytics, 2014*).
4. Voice-based search usually falls into one of four types. 30% of respondents said they would classify as general information, 27% as personal assistants, 22% as local information, and 21% as amusement and enjoyment. 2016's Search Engine Land.
5. Voice-based search queries are typified by a question and are typically longer than text-based searches. Voice-based queries usually consist of three to five keywords, with the first one being what, followed by why, who, where, and how. (2016, Campaign).
6. Of the users, about 50% expressed satisfaction with personal voice assistants, while 38% expressed neutrality. The percentage of users unsatisfied with personal voice assistants was only 12%. 2016's Search Engine Land.Accordingto some experts by the year 2020, 30% of browsingsessions done on the web wouldbedonewithoutascreen.(*Gartner, 2016*).
7. As per comScore, half of all the searches on the web by the year 2020 would be voice basedsearch.(*Campaign, 2016*).
8. 57.8% of the users use voice based search on their smart phones, while 60% of the users usevoicebasedsearchwhenathome.(*StoneTemple, 2017*).

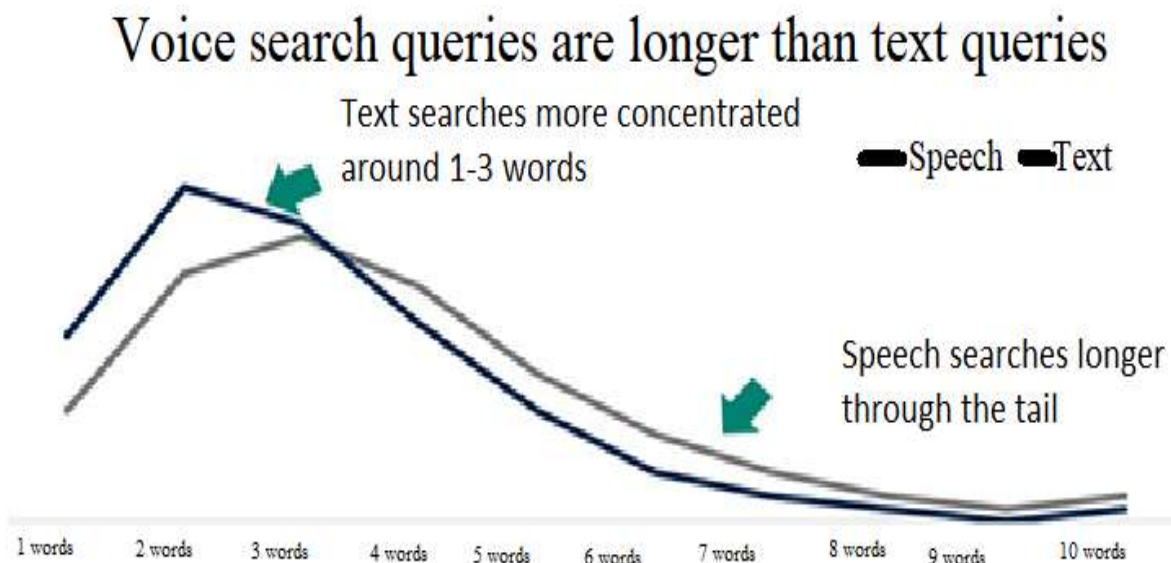
The top 10 amazing statistics about voice-activated search

1. According to Alpine.AI, there were about 1 billion voice-based queries made monthly as of January 2018.
2. According to Technavio, the voice recognition industry would reach a staggering \$601 million by the end of 2019.
3. According to CTA, 25% of consumers utilised voice-activated personal phone assistants to help them shop for the holidays in 2017.
4. According to GeoMarketing, 65% of users of Google Home or Amazon Alexa said they could never envision going back to the time before smart speakers.
5. Speaking with a voice-activated speaker is like having a conversation with a friend, according to 41% of consumers who possess one (Google).
6. According to Global Web Index, 1 in 4 people in the 16–24 age range utilise voice-based mobile search.
7. According to eMarketer, 23.8% of Americans who used voice-activated speakers at least once a month in 2017 used Google Home, while 70.6% of Americans used Amazon Echo.
8. According to OC&C Strategy Consultants, 20% of voice buying in 2017 was grocery shopping. In contrast, only 8% of the activity involved clothes shopping.
9. According to Google, 39% of voice-activated speaker owners would prefer to receive alternatives that would assist them in finding business information, and 52% of them would prefer to receive information about discounts, specials, and promotions from brands.
10. According to comScore, voice-based searches will account for half of all searches by 2020.

3. RationaleforStudy

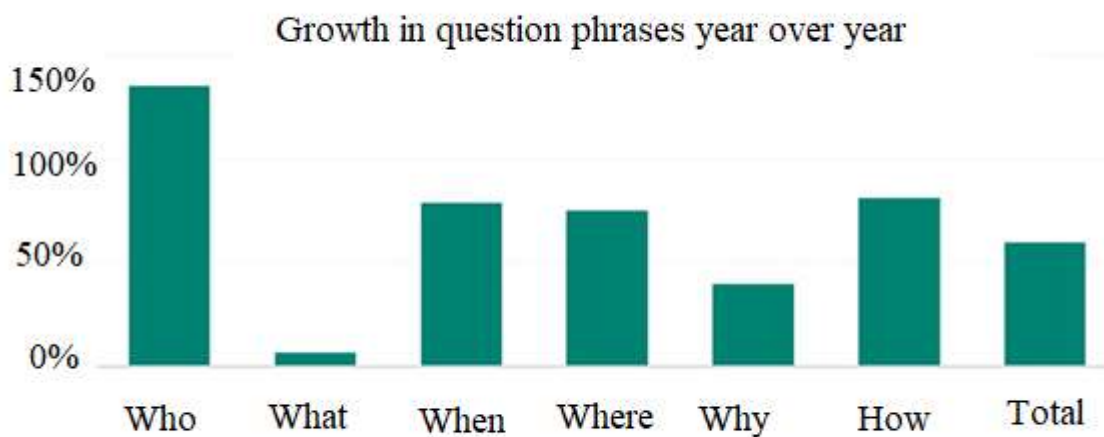
Voice-based searches should yield different results because they are unique.

According to a study, employing voice-based search causes an unconscious change in behaviour. If you use your browser's text-based search function to find a restaurant, you might enter "Best Brunch in Delhi." Your behaviour alters when you use a voice-activated search engine, such as "What restaurant has the best brunch in Delhi?" or "What restaurants are open for brunch now near me?"



Because of this, voice-based search queries are longer than text-based search queries. They typically consist of three to five keywords, tend to ask a question directly, and are characterized by words like who, how, what, where, why, and when. Users also expect the search engine to respond to their queries.

Questions phrases are more likely to be voice



Search Engine Watch Jason Tabling "How Will Voice Search Impact A Search Marketer's World?" December 14

Additionally, carefully examining the word choices made in the inquiry offers additional contexts regarding the user's intent, which would assist advertisers in understanding the consumer's position inside the sales funnel. Is the buyer only doing research or are they prepared to buy?

When a customer inquires, "What is the difference between an infant car seat and a convertible car seat?" for instance, it is likely that they are conducting research. However, there's a good possibility they're prepared to buy if they inquire about things like "Where can I buy a Mesa car seat?" or "How much is a Mesa car seat?".

The results of this study will be beneficial to all digital marketers, large and small company owners alike, who use one or more digital marketing platforms to establish their brand among consumers of their goods or services and connect with prospective clients when they conduct product and service searches.

4. Problem statement and research objectives

Primary objective

1. To study the awareness and perception of voice based search and how it affects digital marketing specifically for India region.

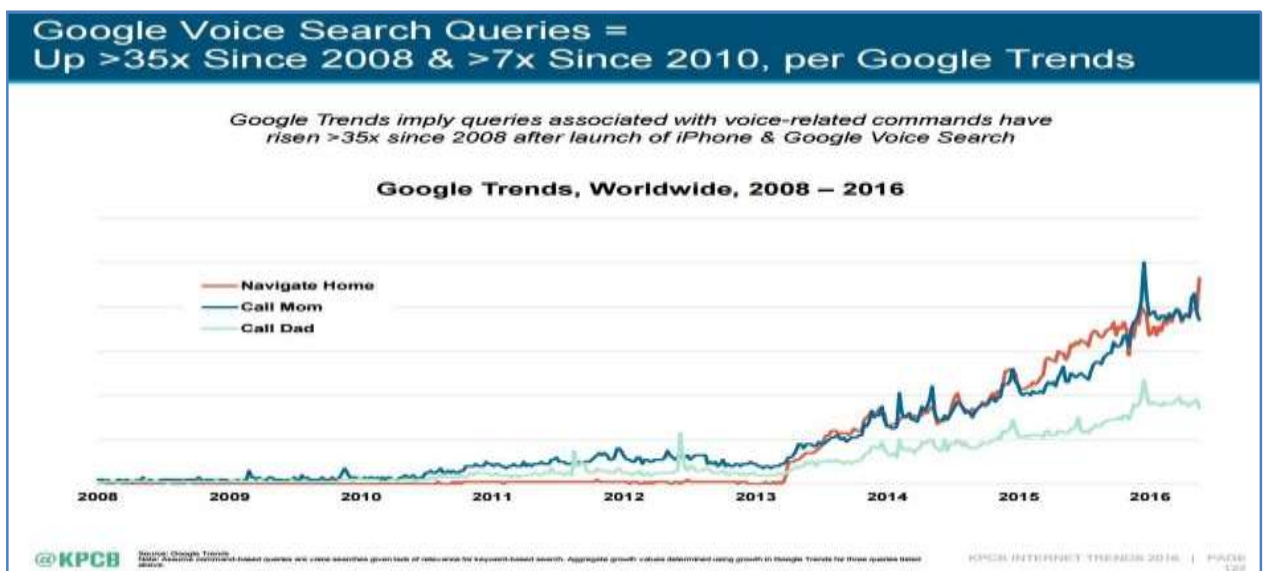
Secondary objectives

1. To study voice based search as a trend among people of various demographics.
2. To study the current digital marketing strategy of the organizations and understand what has changed for them. How effective is their strategy in the current market scenario, and whether they are prepared for the voice based search revolution

5. Methodology

This research is exploratory. Both qualitative and quantitative analysis is used in this study. Since the goal of this study is to conduct a critical review, data from all over the world have been gathered from the internet. A thorough investigation of secondary data and information was conducted in order to prepare this report. Secondary sources of data and information were gathered from e-books that have been published, periodicals, working papers, conference papers, websites, and articles that have been published in various publications. This is a best practice and standard procedure for critical type evaluation.

6. Analysis and discussion of Study



Voice-activated search is mobile, and you use mobile devices on a daily basis

Voice-based search is becoming more mobile-friendly and locally focused as it becomes more integrated into mobile applications and devices. Numerous digital assistants are now included into items that you use on a daily basis, both at work and at home.

For instance, Cortana, a voice assistant included into Windows 10, enables text- and voice-based search on all Windows devices, including Xbox One, laptops, and Windows phones.

Having an Amazon Echo Dot is similar to having a Star-Trek computer at your disposal for voice commands. It can play music, read audio books, answer your queries, and even manage other smart home-connected gadgets in your house.

6.1 It's about the conversation

Since we have been using the current search engines for over a decade, we have become adept at expressing ourselves in a few words when we type our searches into them. With voice-based search, users can now find what they're looking for more quickly, intimately, and conveniently than they could with text-based search engines because of natural language. Because of this, with each encounter, the artificial intelligence that powers voice-based search gets increasingly sophisticated. This improves the artificial intelligence (A.I.) engine's comprehension of the user's purpose and makes search more conversational.

The search engines that power voice-activated search and personal assistants are concentrating on novel ways to leverage artificial intelligence and machine learning to analyze all available data signals, including those from their own products and search knowledge graphs, as well as signals of intent such as how a current query relates to past queries, geo-location signals, and your own connected data.

The artificial intelligence systems that underpin voice search will be able to comprehend who you are, what you are doing, and where you are in order to comprehend the context of what you want, based on your behavior patterns and preferences, as more gadgets and the Internet of Things send data signals to them. As a result, voice search becomes

somewhat predictive, able to decipher intent and estimate the searcher's potential future demands.

6.2 Why should business owners and digital marketers care about voice-based search?

Just consider this: If the success of your business is directly related to your digital marketing strategies, and if those efforts are directly related to voice-based searches, then it follows that voice-based search trends will inevitably have an impact on your firm. Whether or not this has a positive or bad outcome will rely on how successfully your strategies are adjusted to the shifting environments.

Through accurate results and speed and convenience, voice-based search enhances the user experience of the search engine. This would imply that your success rate and the likelihood of the digital personal assistant recommending your website as the best option would increase if your digital marketing strategy and online content are optimised for mobile use.

6.3 Voicebased Search & SEO

It is undeniable that the rise of voice-based search will have an impact on SEO strategy and digital marketing, either positively or negatively. It is up to you whether you view the glass as half-full or half-empty.

The main distinction between voice and text searches is why your SEO approach needs to be adjusted. The ways that voice-based search impacts SEO are listed below.

- It uses conversational language
- Text search transforms into long-tail question queries.
- Emphasis is placed on featured snippets
- Importance of informative and authoritative content
- The way the degree of conversational language varies between text and voice search is one of their primary distinctions. Even while you could search for "best restaurants Delhi," you're more likely to ask Siri, "Hey, what are the best restaurants in Delhi that are open now and have a booking available?" if you use voice-activated search. Voice-based search relies on conversations, therefore your content needs to sound more like natural language.

This includes having the answer to specific questions.

Accurate and timely responses to queries are essential for Google to prioritise them as featured snippets. In one instance, there was a 516% increase in sessions, an improvement in visibility as an authority, and a notable rise in click through rate due to the acquisition of a featured snippet. Google will choose you for this position if you can provide the solution that voice-based searchers are looking for and earn this highly sought-after position by producing material that is both authoritative and educational. This can no longer be accomplished by just repeating keywords a few times without providing a context that makes sense. If the article is well-written, there may also be a chance to advertise your company.

7. Conclusion

Voice assistants are increasingly a feature of everything. These days, voice home assistants like Google Home and Alexa Home exist in addition to phones.

With this it can be concluded that as the voice search grows the search engines would also keep on upgrading themselves. Digital marketing professionals who have not adapted to this change in behavior would be left behind and lose out on the next big wave of digital change.

8. Gap in Literature/Limitations of the present investigation

This body of research demonstrates unequivocally that everyone believes voice-based search will have a significant impact on digital marketing. It will fundamentally alter SEO as we currently understand it. Nevertheless, no particular research has been done to demonstrate these effects and how they might alter the scenario for product consumption and search. As of right now, no particular data is available to indicate which business would be more negatively impacted than the other. For instance, the degree and manner in which brick and mortar establishments are impacted may differ from that of internet retailers.

REFERENCES

1. <https://www.theedesign.com/blog/2017/voice-search-impacts-digital-marketing> [visited on 02-Mar-18]
2. <https://www.dbswebsite.com/blog/2017/03/28/the-impact-of-voice-search-on-digital-marketing/> [visited on 02-Mar-18]
3. <https://www.campaignlive.co.uk/article/just-say-it-future-search-voice-personal-digital-assistants/1392459> [visited on 02-Mar-18]
4. <http://blog.absolutedigitalmedia.com/the-impact-of-voice-search-on-digital-marketing/> [visited on 02-Mar-18]
5. <https://www.bluecorona.com/blog/voice-search-digital-marketing-strategies> [visited on 05-Apr-18] <https://www.theleverageway.com/blog/voice-search-digital-marketing/> [visited on 05-Apr-18] <https://www.forbes.com/sites/jaysondemers/2018/01/12/how-to-take-advantage-of-voice-search-in-your-marketing-campaign/#3eb47a7d43> [visited on 12-Jun-18] <https://digitalmarketinginstitute.com/blog/2017-12-22->

- seo-how-to-optimize-for-voice-search[visited on 12-Jun-18]
6. <http://www.techmagnate.com/blog/how-voice-search-will-impact-seo-in-2018/>[visited on 01-Jul-18]<https://www.jeffbullas.com/impact-of-voice-search/>[visited on 01-Jul-18]<https://neilpatel.com/blog/type-no-more-how-voice-search-is-going-to-impact-the-seo-landscape/>[visited on 01-Jul-18]
 7. <https://seopressor.com/blog/how-voice-search-is-changing-digital-marketing/>[visited on 10-Jul-18]<https://searchengineland.com/seo-2018-optimizing-voice-search-288078>[visited on 10-Jul-18]<https://blog.advision.co/how-voice-search-will-shape-the-future-of-digital-marketing>[visited on 11-Aug-18]
 8. <https://www.marketingprofs.com/articles/2017/33008/why-and-how-to-adapt-your-marketing-to-voice-search-this-year>[visited on 11-Aug-18]<https://www.networkworld.com/article/3168896/marketing/how-voice-search-is-transforming-digital-marketing.html>[visited on 11-Aug-18]
 9. <https://digitalmonster.org/impact-voice-search-optimization-digital-marketing/>[visited on 11-Aug-18]
 10. <http://digitalmarketingmagazine.co.uk/search-digital-marketing/the-death-of-the-click-the-impact-of-voice-search/3993>[visited on 11-Aug-18]
 11. *Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation*- Damian Ryan Kogan Page Publishers, 03-Nov-2016
 12. *Digital Marketing For Dummies*- Ryan Deiss, Russ Henneberry- John Wiley & Sons, 17-Jan-201
 13. *Digital Marketing: A Practical Approach*- Alan Charlesworth- Routledge, 25-Jul-2014
 14. *The Art of Digital Marketing: The Definitive Guide to Creating Strategic, Targeted, and Measurable Online Campaigns*- Ian Dodson, John Wiley & Sons, 04-Apr-2016
 15. Dharamveer, Samsher, D. B. Singh, A. K. Singh, N. Kumar, Solar Distiller Unit Loaded with Nanofluid- A Short Review. *Lecture Notes in Mechanical Engineering*, Springer, Singapore, (2019) 241-247, https://doi.org/10.1007/978-981-13-6577-5_24.
 16. Shiv Kumar, Dharamveer Singh, "Energy And Exergy Analysis Of Active Solar Stills Using Compound Parabolic Concentrator" *International Research Journal of Engineering and Technology* Vols. 6, Issue 12, Dec 2019, ISSN (online) 2395-0056. <https://www.irjet.net/archives/V6/i12/IRJET-V6I12327.pdf>
 17. Dharamveer and Samsher, Comparative analyses energy matrices and enviro-economics for active and passive solar still, *material today: proceedings*, 2020, <https://doi.org/10.1016/j.matpr.2020.10.001>
 18. Dharamveer, Samsher, Anil Kumar, Analytical study of Nth identical photovoltaic thermal (PVT) compound parabolic concentrator (CPC) active double slope solar distiller with helical coiled heat exchanger using CuO Nanoparticles, *Desalination and water treatment*, 233 (2021) 30-51, <https://doi.org/10.5004/dwt.2021.27526>
 19. Dharamveer, Samsher, Anil Kumar, Performance analysis of N-identical PVT-CPC collectors an active single slope solar distiller with a helically coiled heat exchanger using CuO nanoparticles, *Water supply*, October 2021, <https://doi.org/10.2166/ws.2021.348>
 20. M. Kumar and D. Singh, Comparative analysis of single phase microchannel for heat flow Experimental and using CFD, *International Journal of Research in Engineering and Science (IJRES)*, 10 (2022) 03, 44-58. <https://www.ijres.org/papers/Volume-10/Issue-3/Ser-3/G10034458.pdf>
 21. Subrit and D. Singh, Performance and thermal analysis of coal and waste cotton oil liquid obtained by pyrolysis fuel in diesel engine, *International Journal of Research in Engineering and Science (IJRES)*, 10 (2022) 04, 23-31. <https://www.ijres.org/papers/Volume-10/Issue-4/Ser-1/E10042331.pdf>
 22. Rajesh Kumar and Dharamveer Singh, "Hygrothermal buckling response of laminated composite plates with random material properties Micro-mechanical model," *International Journal of Applied Mechanics and Materials* Vols. 110-116 pp 113-119, <https://doi.org/10.4028/www.scientific.net/AMM.110-116.113>
 23. Anubhav Kumar Anup, Dharamveer Singh "FEA Analysis of Refrigerator Compartment for Optimizing Thermal Efficiency" *International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)* Vol. 10 (3), pp.3951-3972, 30 June 2020.
 24. Shiv Kumar, Dharamveer Singh, "Optimizing thermal behavior of compact heat exchanger" *International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)* Vol. 10 (3), pp. 8113-8130, 30 June 2020.
 25. *Digital Marketing Analytics: Making Sense of Consumer Data in a Digital World*- Chuck Hemann, Ken Burbary- Que Publishing, 10-Apr-2013
 26. *Digital Marketing in the Zone: The Ultimate System for Digital Marketing Success*- David Reske- Morgan James Publishing, 09-Jun-2017
 27. *The Digital Marketing Handbook: A Step-By-Step Guide to Creating Websites That Sell*- Robert W. Bly- Entrepreneur Press, 17-Apr-2018
 28. *B2B Digital Marketing: Using the Web to Market Directly to Businesses*- Michael Miller, Que Publishing, 07-Mar-2012
 29. *Experiences: The 7th Era of Marketing* - Robert Rose, Carla Johnson- Content Marketing Institute *Digital Marketing Strategy: An Integrated Approach to Online Marketing*- Simon Kingsnorth, Kogan Page Publishers, 03-May-2016
 30. *Digital Marketers Sound Off: Tips, Tactics, Tools, and Predictions from 101 Digital Marketing Specialists*- Matt Chiera, Matt Chiera, 31-May-2018