

Implementation of Search Engine Optimization (SEO) on Website of IKM Semanggi Harmony

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Abstract – Website is very popular Online media used for promotion products besides simple and not too high cost can also reach all people across Indonesia. But the problem there are a lot of similar websites spread over in Internet. And business actors will want the website is always tracked and occupy a position in the first page of the search engine so that many Internet visitors can visit and business actors can introduce products. To get website visitors used method of search engine optimization or SEO (Search Engine Optimization). SEO makes the website search optimal, so internet users easily find the website. It is expected to develop its marketing and result in increased sales. This research has the purpose is to be able to Implementing the SEO (Search Engine Optimizer) Techniques and the promotion of IKM creative Semanggi Harmoni through online media. Method of system development that will be used is waterfall method consisting of requirement, design, Implementation, Verification dan maintenance. The result of implementation can be concluded that originally did not index successfully Indexed by Google and at the time in the test website is on the second page for the keyword "Wayang kulit Werkudoro" and for speed, the ikm semanggi harmoni website get a score of 85 in pagespeed insights and 74% at GTmetrix.

Keyword – Search Engine Optimization, SEO, Website Promotion, Small Medium industry.

I. INTRODUCTION

City of Surakarta has a concept of economic development. Based on the focus of the on creative economic development supported by the ability of home creative industry in every region. The city of Surakarta has been having the center of Creative Semanggi Harmoni as a form Solo city as a city of smart city that rests on environmentally friendly creative economy.

Therefore, to get website visitors used method of search engine optimization or SEO (Search Engine Optimization). SEO makes the website search optimal, so internet users easily find the website. It is expected to develop its marketing and result in increased sales.

Contribution of research to the master Plan of Business technology research is the use of SEO techniques for the

promotion of introduction and sale of products IKM online with increasing website traffic by utilizing search engines, with such a thing the website will be visited by many Internet users if the user enters certain keywords on search engines.

Based on the explanation above, it can be made formulation of problems is "How to Implement the SEO (Search Engine Optimizer) for the website Creative Center of Semanggi Harmoni".

II. LIBRARY OVERVIEW

Some of the theories to underlying this research include

2.1. Search Engine "Google"

Search engines are one of the computer programs designed to find or search for files stored in a computer.

Search engines are one of the computer programs designed to find or search for files stored in a computer. While the web search engine (web search engine) is a search engine made to look for important information about WWW (World Wide Web) and is used for FTP servers (file Transfer Protocol). Search results on Web search engines are usually presented in the form of lists and are usually called SERP (Search Engine Result Pages). Information obtained from these search results is usually web pages, images, and other types of information.

Google has three important parts:

1. Googlebot, a web crawler that finds and retrieves web pages of information, such as content, meta tags, titles [1]
2. Google indexer, indexing each word on each page and saving the resulting index in the database.
3. Query the processor, which compares the search query by the user to index and recommend the document that is considered the most relevant.

2.2. Search Engine Optimization (SEO)

SEO is a technique used so that the website can be known easily by search engines so as to increase the visitors of the website, there are 2 kinds of SEO techniques that are SEO on page and SEO off page. SEO on page is the techniques used on the website page by modifying the parts of the website such as content, links, tags, keywords[2], while SEO off page is a technique done outside the website.[5]

2.3. Internet Marketing

Internet Marketing is also known as digital marketing, web marketing, online marketing or e-marketing. Every marketing activity online using internet technology is internet marketing. Includes online activities such as e-mail and social networks [3].

There are three fundamental principles of Internet marketing [3] :

1. Immediacy: Rapid changes and up to date in a time per minute including responding online.
2. Personalisation: Customers should be able to respond and served personally not the same for each customer. Use online personal information that customers enter as company benefits.
3. Relevance: Online communication should be made interesting and know how to make customers feel served as if welcomed their arrival at the door. So make customers feel comfortable. The difference in Internet marketing with

traditional marketing is that internet marketing is more reasonable, cheaper, and faster as well as reaching many customers and is the best way for businesses that want to enter both local and international markets [4].

III. METHODS

The system development method to be used is the Waterfall method. The stages in the waterfall method are needs, design, implementation, verification and Maintenance. The stages of waterfall method can be divided into:

3.1. Requirement

At this stage, data collection consists of observation and analysis. To SEO on the website of Creative Semanggi Harmoni Center, and the study of the library of researchers will look for theories and research journals regarding SEO and SEO techniques

3.2. Design

At this stage is done content creation website of Sentra IKM Creative Semanggi Harmoni for media Search Engine Optimization (SEO) website.

3.3. Implementation

At this stage is done implementation and addition of SEO techniques into the website is SEO On Page and some SEO techniques Off Page.

3.4. Verification

At this stage is conducted testing is the observation of website position in Google search engine and using Whatsmyserp tool. While for loading speed of websites using the PageSpeed Insights and GTmetrix Tools.

3.5. Maintenance

At this stage, it is useful to correct errors that were not found in the previous step and the position of the article website Creative Semanggi Harmony Center periodically.

At the implementation, stage used several techniques. SEO techniques used are SEO on Page consisting of:

1. Install Wordpress SEO Plugins named Yoast SEO Premium.
2. Define the focus Keyphrase, SEO Title and meta description of each article post using the help of keyword research tool named Google Keyword Planner and Google Trends.
3. Creating navigation/sitemap on the website.

- Optimizing the website to be accessible to mobile devices by checking in Google Mobile Friendly Test.
- Add Heading tags to the SEO title and meta description.
- Add hyperlinks to each article post.

While techniques other than SEO On Page, Also use SEO Off Page techniques is registering a website to search engines suppose. Google or Bing. For Google makes use of one Google application that is Google search console.

IV. RESULT AND DISCUSSION

On the main page of IKM Semanggi Harmoni website displaying articles or products sold at IKM Semanggi Harmoni which can be selected on the main menu. The image of the main page of the website IKM Semanggi Harmony is in the picture.



Figure 4.1. Main page of IKM Semanggi Harmoni Website

4.1. SEO On Page Implementation

The implementation of SEO On Page consists of several ways :

- Install Wordpress SEO Plugins named Yoast SEO Premium. Yoast SEO Premium is used as plugins to help SEO On Page. Plugins Yoast SEO Premium can be seen on the figure 4.2.

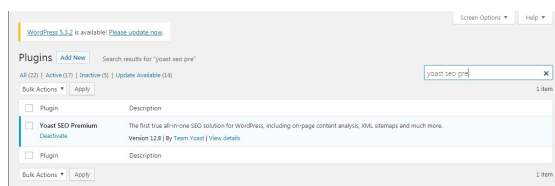


Figure 4.2. Installing Yoast SEO Premium Plugins in Wordpress

- Determining Focus Keyphrase, SEO Title and Meta Description.

The first stage is keyword research to determine the keywords that many Internet users are looking for, such as will raise the article titled "NASRAFA MERIAHKAN

FESTIVAL PAYUNG INDONESIA 2019" Articles can be seen below on the figure 4.3

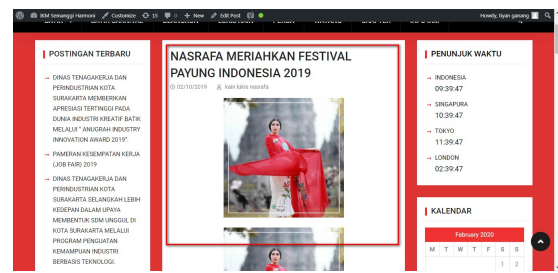


Figure 4.3. Post article by title "Nasrafa Meriahkan Festival Payung Indonesia 2019"

Then used tools called Google Keyword Planner and Google Trends. For keyword research with Google Keyword Planner

Keyword (by relevance)	Approx. monthly searches	Competition	Ad impression share	Top of page bid (low range)	Top of page bid (high range)	Account status
☐ festival payung	100 - 1K	Low	--	--	--	--
☐ festival payung indonesia 2019	10 - 100	Low	--	--	--	--

Figure 4.4. Keyword research results using Google Keyword Planner

For keyword research using Google trend with Indonesian search parameters and data taken 1 year last and obtained result.

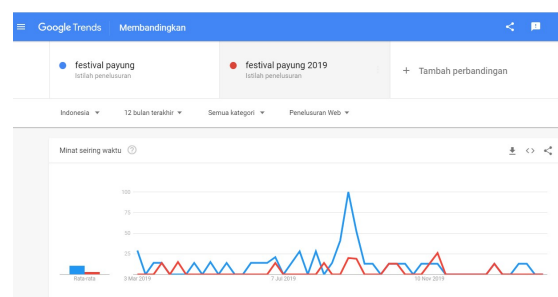


Figure 4.5. Keyword research results using Google Trends

From the research results using Google Keyword Planner tool and Google Trends get keyword "Festival Payung" because the keyword is most searched compared to the word "Festival Payung 2019", after it was put to the article.

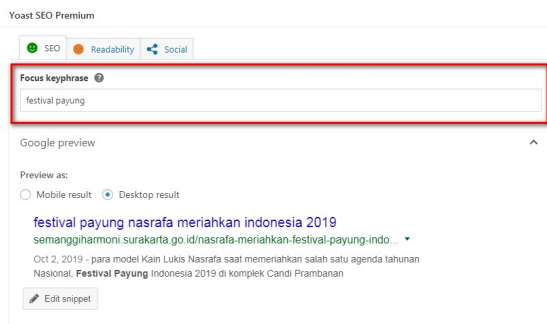


Figure 4.6. Focus Keyphrase in Yoast SEO Premium Tool

3. Creating a navigation/sitemap on the website.

First to create a sitemap that needs to be done is enable XML Sitemap on the menu General Yoast SEO Premium and then select see the XML sitemap.

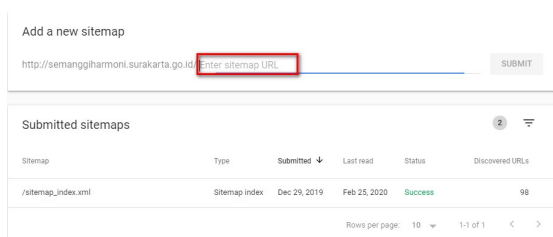


Figure 4.7. Adding a Sitemap to Google Console

4. Optimizing website to be accessible to mobile devices.

To check the website can be accessed via mobile device then the tool required Google's mobile-friendliness test

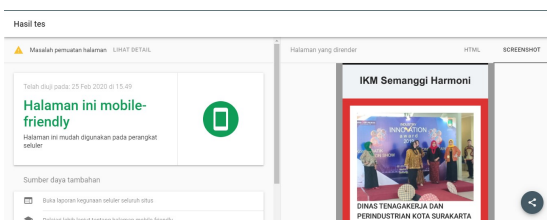


Figure 4.8. Results from Google's mobile-friendliness test tool

5. Add heading tags to the SEO title and meta description.

The title optimization, title is optimized with the keyword, where the selected keyword will be inserted in the SEO title such as the article titled "Festival Payung Indonesia 2019 Dimeriahkan Nasrafa" was formulated with the keyword "Umbrella festival" For meta description in the contents with a long sentence in which there must be a keyword "festival payung".

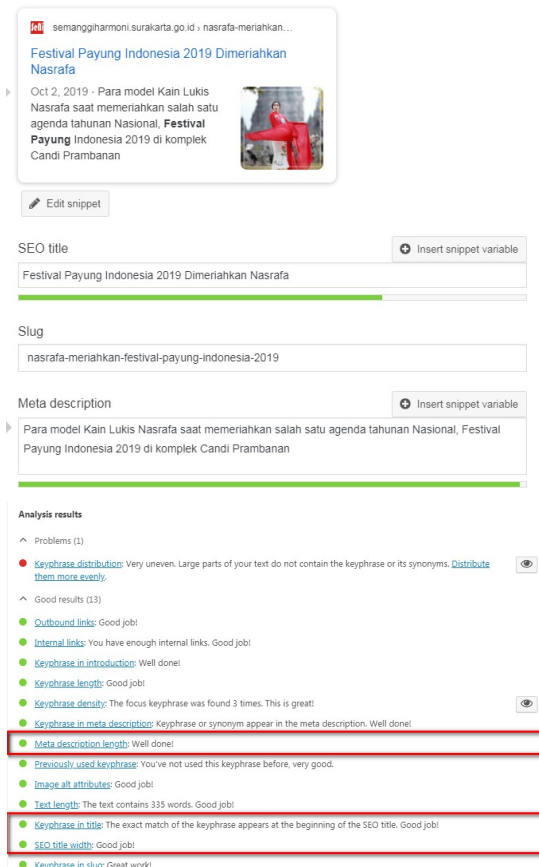


Figure 4.9. input title SEO dan meta description

6. Add internal links and outbound links

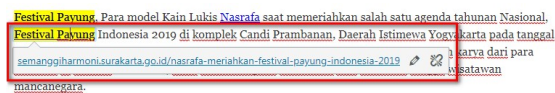


Figure 4.10. Internal Link



Figure 4.11. Outbound Link

4.2. SEO Off Page Implementation

To copy the meta tag for WordPress can use the plugins named Plugins insert headers and footers and enter the META tag.

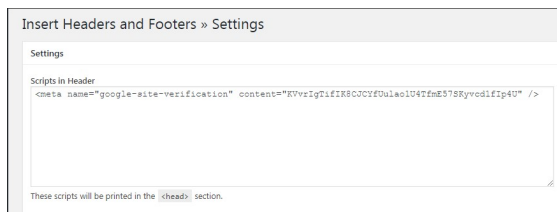


Figure 4.12. Form Script Verification in Plugins Insert Headers and footers

4.3. Testing SEO

In the tests that have been done using the tools Page Speed Insights that the website IKM Semanggi Harmoni get a score of 85.

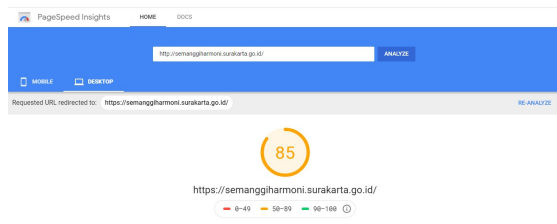


Figure 4.13. Pagespeed Insights Tools Test Results

Then in the testing using the GTmetrix tool that the website IKM Semanggi Harmoni has page speed 74%, and fully loaded time 4.5 second and total page size 962 KB.

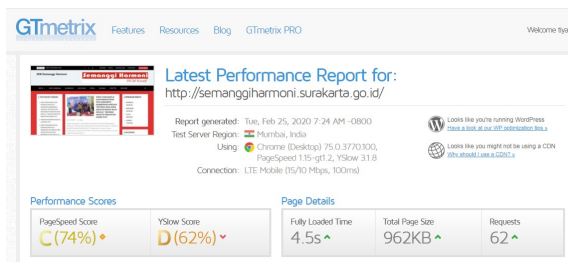


Figure 4.14 GTmetrix Tools Test Results

For the position of the website on the Google search engine, using WHATSMYSERP tool with the keyword "Wayang Kulit Werkudoro" is position to 14.

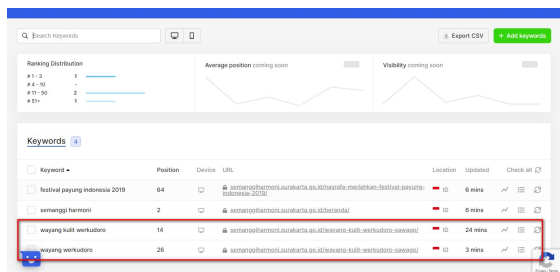


Figure 4.15 Test results in Whatsmyserp

Then on search on search engines Google obtained the website is on the page to 2 by using the keyword "wayang kulit werkudoro".

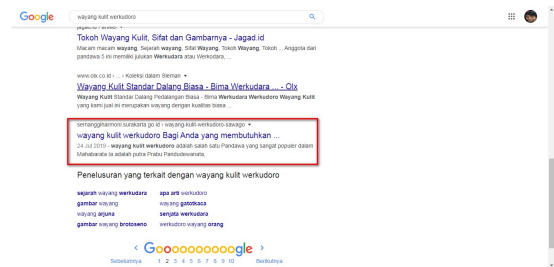


Figure 4.16 Position Website on Google search engine

V. CONCLUSION

Implementation of SEO techniques On Page and off page can improve SERP (search engine result Page) that originally did not index successfully Indexed by Google and at the time in the test website is on the second page for the keyword "Wayang kulit Werkudoro". While for speed, the ikm semanggi harmoni website get a score of 85 in pagespeed insights and 74% at GTmetrix which signifies that the website speed has been good enough and can still be improved.

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