

Implementation of Content Management with Search Engine Optimization on the Aptikom North Sumatra Website

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Abstract

In the digital era, Search Engine Optimization (SEO) has become a crucial element in enhancing the visibility and accessibility of a website on search engines such as Google. For APTIKOM North Sumatra, an optimized website plays an essential role in disseminating information, strengthening communication among members, and increasing public engagement. However, the primary challenge lies in the lack of an SEO-based content management strategy, including suboptimal keyword usage, poorly structured content, and limited implementation of both on-page and off-page SEO techniques. This study aims to explore how the implementation of an SEO-driven content management strategy can improve the visibility and user interaction on the APTIKOM North Sumatra website.

Keywords: Search Engine Optimization (SEO), Website Content Management, Academic Website Optimization, APTIKOM North Sumatra.

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2nd International Conference on Islamic Community Studies (ICICS)

Theme: History of Malay Civilisation and Islamic Human Capacity and Halal Hub in the Globalization Era

<https://proceeding.pancabudi.ac.id/index.php/ICIE/index>

Introduction

In an increasingly advanced digital era, search engine optimization (SEO) has become a crucial aspect in enhancing the visibility and reach of a website. SEO not only serves to improve a site's ranking on search engines such as Google, but also contributes to increasing high-quality organic traffic. For organizations like the Association of Informatics and Computer Higher Education Institutions (APTIKOM) of North Sumatra, a well-optimized website is a strategic necessity for disseminating information, facilitating communication among members, and increasing public engagement.

APTIKOM North Sumatra plays an important role in advancing the fields of informatics and computer science in the region. However, a common challenge lies in the lack of effective content management strategies to support SEO optimization. Poorly structured content, the use of less relevant keywords, and the limited application of on-page and off-page SEO techniques can result in low website rankings on search engines. This leads to reduced website visits and limited exposure of information provided by APTIKOM to the academic community and industry stakeholders.

Implementing structured and SEO-based content management is therefore essential to improve the performance of the APTIKOM North Sumatra website. This includes strategies such as the use of appropriate keywords, optimization of meta descriptions, application of link-building techniques, and the utilization of engaging multimedia content. In addition, consistent updates of informative and relevant content also play a role in enhancing the website's credibility and appeal to visitors.

This study aims to explore how content management implementation can contribute to the SEO optimization of the APTIKOM North Sumatra website. By understanding the appropriate strategies, the website is expected to become more easily discoverable by its target audience, increase user interaction, and strengthen APTIKOM North Sumatra's position within the academic and professional spheres of information and computer technology. Furthermore, the findings of this study are expected to provide recommendations for similar institutions in developing effective and sustainable digital strategies.

Literature Review

- a. Reviewing theories and concepts related to SEO, digital content management strategies, and best practices for optimizing academic and organizational websites.
- b. Examining previous studies relevant to this research.

Method and Experimental Details

This study was conducted through several systematic stages to examine the implementation of SEO-based content management on the APTIKOM North Sumatra website. The research procedures applied are as follows:

3.1 Preparation Stage

3.1.1 Problem Identification

- a. Determining the main issues related to the visibility of the APTIKOM North Sumatra website on search engines.
- b. Identifying the factors that affect SEO optimization on the website.

3.1.2 Formulation of Research Objectives and Questions

- a. Establishing the research objectives focusing on the implementation of SEO-based content management.
- b. Developing research questions to be answered through data analysis.

3.1.3 Determination of Methods and Research Instruments

- a. Applying a qualitative approach using a case study method on the APTIKOM North Sumatra website.

- b. Selecting data collection techniques consisting of observation, interviews, and document analysis.
- c. Determining SEO analysis tools such as Google Analytics and Google Search Console.

3.2 Data Collection Stage

3.2.1 Direct Observation of the Website

- a. Identifying the initial condition of the website in relation to on-page and off-page SEO aspects.
- b. Analyzing content structure, meta descriptions, keyword usage, loading speed, and other technical SEO factors.

3.2.2 Interviews with Website Content Managers

- a. Conducting in-depth interviews with the APTIKOM North Sumatra content management team.
- b. Gathering information about existing SEO strategies, challenges encountered, and their understanding of SEO.

3.3 Documentation Analysis

- a. Collecting data from internal documents related to website content management strategies.
- b. Analyzing website performance reports from Google Analytics and Google Search Console.

3.4 Data Analysis Stage

1. Data Reduction

- a. Filtering and categorizing the collected data based on the SEO aspects being examined.
- b. Eliminating irrelevant data to focus on key factors influencing website SEO performance.

3.5 Data Presentation

- a. Presenting the analysis results in descriptive form, tables, and charts to support interpretation.
- b. Comparing the analysis findings with theories and best practices in the field of SEO.

3.6 Conclusion Drawing

- a. Concluding the effectiveness of SEO strategy implementation on the APTIKOM North Sumatra website.
- b. Identifying strengths and weaknesses of the existing SEO strategies.

3.7 Recommendation and Report Preparation Stage

3.7.1 Formulation of Recommendations

- a. Developing recommendations based on research findings to enhance website SEO effectiveness.
- b. Designing SEO strategies that can be adopted by the APTIKOM North Sumatra website managers.

3.7.2 Research Report Compilation

- a. Preparing the final research report, including background, methods, analysis results, and recommendations.
- b. Integrating the research findings with relevant SEO theories.

3.7.3 Evaluation and Validation of Results

- a. Validating the research findings using data triangulation techniques.
- b. Reviewing the results by comparing them with established SEO standards.

3.8 Research Output Delivery Stage

3.8.1 Discussion with Stakeholders

- a. Presenting the research findings to the APTIKOM North Sumatra website management team.
- b. Discussing the implementation of the proposed recommendations.

3.8.2 Publication and Documentation

- a. Publishing the research findings in the form of an academic report or scientific article.
- b. Providing documentation of the analysis results and recommendations to APTIKOM North Sumatra for future SEO evaluation and strategy development.

Discussion

The APTIKOM North Sumatra website plays an important role in providing information related to the development of higher education in the field of Information and Computer Technology (IT) in the province of North Sumatra. Since its establishment in 1983, APTIKOM has been committed to improving the quality of education through collaboration among higher education institutions focused on IT. The website pages, such as About, Organization, Membership, and Events, contain highly relevant information for visitors who wish to learn more about the history, structure, and activities of APTIKOM. However, to further maximize search engine ranking, SEO optimization—both in content and technical aspects—is required to achieve better visibility in search results.

Conclusion

In the conducted research, several recommendations for further development are proposed as follows:

- a. It is recommended to optimize each page with relevant and frequently searched keywords. Ensure the natural use of keywords throughout the page content, such as “Information Technology Education in North Sumatra” or “IT Higher Education Collaboration.”
- b. Use clear and appropriate heading structures (H1, H2, H3) for each section on the page to help search engines understand the context and relevance of each content segment.
- c. The website needs to be optimized to ensure good loading speed and a responsive display on mobile devices, considering that the majority of users access websites through their phones.
- d. Ensure that each page has a concise, focused meta description containing the main keywords to attract user attention in search results.
- a. e. It is recommended to improve internal linking between relevant pages on the website and strive to obtain backlinks from reputable websites to increase page authority in search engines.

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