

IMPROVING DIGITAL VISIBILITY OF GREEN SMES THROUGH LOCAL CONTENT-DRIVEN SEO

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ABSTRACT

Digital transformation has become essential for Indonesian SMEs to remain competitive in the digital economy. However, most environmentally friendly SMEs have not fully utilized digital marketing strategies, particularly local content-based SEO. This study aims to design and implement a local content-based SEO model to enhance digital reach, using Lezza Studio as a case study. The research employed a qualitative approach with a single case study design, incorporating in-depth interviews, observation, and document analysis. The proposed model consists of five stages: local keyword identification, on-page optimization, local narrative content creation, visual media optimization, and continuous adaptation. The results indicate significant improvements in search visibility, organic traffic, and sales conversions. The keyword “kaos custom ramah lingkungan Manado” dominated search results, social media traffic increased (Facebook by 104% and Instagram by 57%), and orders rose by 25%. These findings confirm that implementing local content-based SEO not only improves digital exposure but also delivers tangible business performance impact. The model can be replicated by other SMEs to support sustainable digital transformation.

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INTRODUCTION

Micro, small, and medium enterprises (MSMEs) play a crucial role in Indonesia’s digital economy (Aminullah et al., 2024), yet their participation in digital ecosystems remains uneven. Although internet penetration and online consumer activity continue to rise, many environmentally friendly MSMEs struggle to strengthen their digital presence and remain discoverable on search platforms. This issue is particularly concerning given the growing market demand for sustainable products, which has not been matched by the ability of small businesses to reach potential consumers effectively. As a result, the digital market potential for sustainable local products remains largely underutilized (Kannan & Li, 2017). Despite the increasing relevance of search engines in consumer decision-making, most sustainable MSMEs appear on the third page or later of search results, limiting their visibility and competitiveness. Existing studies further show that local search behavior dominates product-related queries in



Indonesia, yet only a small proportion of MSMEs incorporate local cultural nuances, local keywords, or context-specific narratives into their digital content. This gap highlights a mismatch between consumer search preferences and the digital marketing practices of sustainable MSMEs. Moreover, the complexity of SEO—ranging from technical on-page optimization to the strategic use of localized storytelling—creates additional challenges for small businesses with limited expertise and resources (Berman & Katona, 2013).

Environmentally friendly MSMEs in Indonesia face persistent challenges in achieving meaningful digital visibility due to limited SEO capabilities, inadequate integration of local content, and the absence of a structured and practical SEO model tailored to their context. Despite rising consumer demand for sustainable products, the low discoverability of MSMEs on search platforms prevents these businesses from maximizing market potential, engaging local consumers, and competing effectively in the digital landscape.

In response to this problem, the present study formulates the following research objectives: 1) To analyze the key SEO challenges faced by environmentally friendly MSMEs, including gaps in technical optimization and localized content; 2) To design a structured local content–based SEO model that combines technical SEO components with cultural and contextual narratives; 3) To implement and evaluate the proposed SEO model using Lezza Studio as a case study; 4) To generate practical recommendations for sustainable MSMEs seeking to enhance digital visibility and competitiveness through feasible SEO strategies.

Theoretically, it introduces an integrated framework that combines technical SEO, localized storytelling, and sustainability-oriented branding—dimensions rarely examined collectively in current digital marketing literature. Practically, the study contributes a replicable, low-cost, and resource-efficient SEO model that MSMEs can adopt without requiring advanced technical expertise. Empirically, this study demonstrates how localized content strategies influence search performance and consumer engagement in the Indonesian market. At the policy level, the findings provide insights that may assist government agencies and ecosystem enablers in designing more effective MSME digitalization programs.

First, the study uniquely integrates local cultural narratives with SEO optimization, aligning content strategies with Indonesia’s dominant local search behavior. Second, it specifically focuses on environmentally friendly MSMEs—an underexplored segment in SEO research despite its strategic role in sustainability transitions. Third, the study develops a structured and feasible SEO model tailored to MSMEs with limited resources, addressing a gap in existing frameworks that often overlook small business constraints. Fourth, the SEO model

is validated through a real-world sustainable MSME (Lezza Studio), yielding context-specific, actionable insights that can be adopted widely by other green MSMEs in Indonesia.

Therefore, this study aims to design and implement a practical and replicable model of local content–based SEO to improve the digital reach of environmentally friendly MSMEs, using Lezza Studio as a case study. The objective is to develop a model that integrates technical SEO components with localized cultural narratives, responds to the complexity of search algorithms, and remains feasible for resource-constrained MSMEs. This contribution is intended to fill the existing gap in the literature and provide actionable insights for sustainable MSMEs seeking to strengthen their digital competitiveness (Hollebeek & Macky, 2019).

LITERATURE REVIEW

Digital transformation research consistently highlights the essential role of online visibility for SMEs, particularly in emerging economies where digital ecosystems continue to expand. Prior studies indicate that the integration of digital tools enables small businesses to enhance competitiveness, visibility, and customer reach. However, much of the existing literature on SME digitalization focuses primarily on general digital marketing strategies and less on context-specific approaches such as localized SEO. This limits the applicability of existing frameworks for environmentally friendly MSMEs operating within culturally diverse regions like Indonesia. (Lemon & Verhoef, 2016).

Several researchers emphasize that SEO remains one of the most effective channels for improving discoverability and organic website performance. Yet, conventional SEO models tend to prioritize broad, high-volume keywords, often overlooking the increasing relevance of localized search behaviors., for instance, demonstrate that local SEO strategies significantly improve organic traffic for SMEs; however, their research does not explicitly address how cultural narratives, sustainability messaging, or regional language cues contribute to search relevance and consumer engagement. Similarly, the effectiveness of localized content strategies in boosting digital performance, but their findings stem from broader emerging market contexts and do not delve into challenges specific to resource-constrained sustainable MSMEs. (Hollebeek & Macky, 2019).

In the Indonesian context, consumer behavior research reveals that more than 70% of sustainability-related online searches incorporate local terms or location-based qualifiers. Despite this, only a small proportion of MSMEs strategically integrate local keywords, cultural storytelling, or region-specific terminology into their content. This indicates a clear disconnect between consumer search patterns and the digital marketing practices of MSMEs. The

asymmetry is reinforced by structural barriers frequently cited in the literature, such as limited technical expertise, lack of human resources, and low digital literacy among business owners. Widodo and Susanto (2021) identify these barriers as persistent constraints that prevent SMEs from implementing effective SEO practices, thereby restricting their ability to compete digitally against larger brands. (Pulizzi & Barrett, 2009).

Furthermore, studies on sustainable MSMEs point out an additional complexity not sufficiently addressed in mainstream SEO literature: the need to communicate environmental values in ways that resonate with local cultural identities. While sustainability-oriented products attract interest, many MSMEs struggle to articulate their environmental positioning in culturally meaningful narratives. Existing research on digital branding underscores the importance of localized storytelling—but this has yet to be integrated into SEO-specific models designed for small sustainable enterprises. Taken together, the literature reveals three major gaps (Lim, Ting & Wong, 2022).

First, current SEO frameworks insufficiently address the interplay between localization, cultural relevance, and sustainability messaging. Second, few studies offer actionable, resource-sensitive SEO models tailored for environmentally friendly MSMEs in developing countries. Third, there is limited empirical evidence demonstrating how localized content strategies directly influence visibility, engagement, and conversion metrics in micro-scale sustainable businesses. (Pulizzi & Barrett, 2009). This study seeks to respond directly to these gaps by synthesizing insights from SEO, digital consumer behavior, and sustainable SME research to develop a structured model of local content–based SEO. By grounding the model in real-world application through a case study of Lezza Studio, the research contributes a practical, context-driven framework that aligns digital strategy with local cultural dynamics and sustainability values (Pulizzi & Barrett, 2009).

Theory A

The modern Resource-Based View emphasizes that firms achieve competitive advantage through unique, valuable, and inimitable capabilities—particularly digital and knowledge-based resources. Recent studies highlight that digital marketing competencies and SEO capabilities are strategic intangible assets that allow small firms to outperform competitors in visibility and consumer reach. (Barney, 1991).

Content Marketing Theory argues that high-quality, relevant, and meaningful content increases engagement, trust, and conversion (Hollebeek & Macky, 2019; Kannan & Li, 2017).

Recent evidence shows that localized narrative content—embedded with cultural identity and community relevance—drives stronger emotional resonance and consumer loyalty than generic digital content. (Pulizzi & Barrett, 2009).

Recent developments in search engine research show that consumer search behavior is increasingly local and contextual, with algorithms prioritizing geo-specific, culturally relevant, and intent-driven keywords. Studies in local SEO also confirm that small businesses gain significantly higher visibility when optimizing for local terms, localities, and community-specific semantics. Sustainable Marketing emphasizes integrating environmental values with culturally meaningful communication to shape consumer trust and intention to purchase sustainable products (Lim, Ting & Wong, 2022).

METHODS

This study employed a qualitative research methodology to obtain a comprehensive and context-rich understanding of how local content–based SEO can enhance the digital visibility of environmentally friendly MSMEs. A qualitative approach was selected because the research aims to examine real-world digital marketing practices, explore complex behavioral patterns in localized search contexts, and develop a practical SEO model grounded in empirical observations rather than statistical generalizations. This method is therefore appropriate for investigating processes, meanings, and contextual dynamics that quantitative approaches may not adequately capture (Pulizzi & Barrett, 2009).

Research Hypothesis

Although qualitative studies typically do not test hypotheses statistically, this research incorporates an exploratory hypothesis to guide the inquiry and structure the analysis:

H1: Implementing a structured local content–based SEO model will improve the digital visibility, search ranking, and user engagement of environmentally friendly MSMEs.

This hypothesis serves as an analytical proposition against which empirical patterns, themes, and case evidence are examined throughout the study.

A single case study design was adopted, with Lezza Studio serving as the unit of analysis. Case study design is suitable when the research seeks to conduct an in-depth exploration of a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly defined. This design allows the researcher to observe how SEO strategies are applied, adapted, and experienced directly within the operational environment of a sustainable MSME. The selected case represents a typical environmentally

friendly micro-enterprise facing common challenges in digital visibility, making it a relevant and information-rich case for theoretical and practical insights (Lim, Ting & Wong, 2022).

Research Design

The study followed an exploratory, single-case qualitative research design with three interconnected phases:

1. Diagnostic Phase (Pre-SEO Assessment)

- Baseline analysis of Lezza Studio's digital visibility, keyword rankings, content quality, and search performance.
- Identification of existing challenges, gaps, and opportunities in current digital marketing practices.

2. Intervention Phase (SEO Model Implementation)

- Application of the local content–based SEO model, including localized keyword integration, on-page optimization, culturally relevant storytelling, and technical adjustments across platforms.
- Continuous interaction with the MSME to ensure the model aligns with operational constraints.

3. Evaluation Phase (Post-SEO Analysis)

- Assessment of changes in visibility, engagement, search performance, and consumer response following implementation.
- Comparison of pre- and post-intervention patterns to determine the model's effectiveness.

This cyclical design enables the study to explore “how” and “why” the SEO model functions in context while producing applied insights for MSME implementation.

Purposive sampling was used to select the participant and data sources. The participant—the owner of Lezza Studio—was chosen because of their direct involvement in managing digital marketing activities, making them a key informant with first-hand knowledge of both strategic decisions and operational constraints. Supporting documents, including search analytics, social media performance reports, and SEO implementation records, were also purposively selected based on relevance to the study (Wedel & Kannan, 2016).

Data were collected using three complementary techniques to ensure triangulation and enhance the trustworthiness of findings:

1. In-depth Interviews

Semi-structured interviews were conducted with the business owner to gather insights into digital marketing challenges, keyword selection processes, content development practices, and perceived outcomes of SEO implementation (Pulizzi & Barrett, 2009).

2. **Direct Observation**

The researcher observed ongoing digital marketing activities, including content creation, posting routines, keyword integration, and adjustments to SEO parameters on various platforms. Observations helped capture actual practices that may not be fully articulated during interviews (Pulizzi & Barrett, 2009).

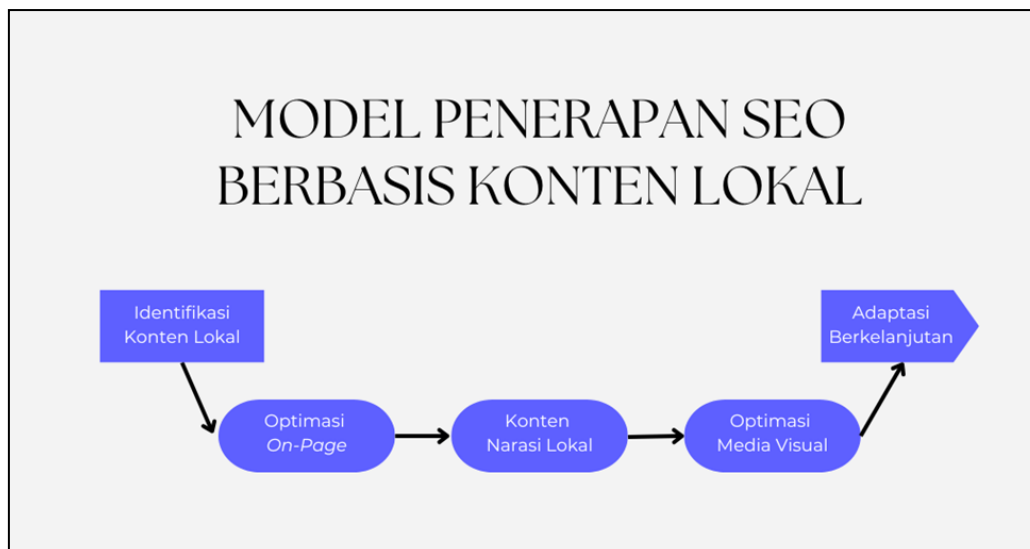
3. **Document Analysis**

Digital performance data—including Google Trends reports, social media insights, and internal records of customer orders—were analyzed to understand the measurable impact of SEO activities. This method validated self-reported information and provided objective indicators of visibility, traffic, and conversion (Lemon & Verhoef, 2016).

Collectively, these procedures ensured that the data collection process was systematic, credible, and aligned with qualitative standards.

The study employed a thematic analysis approach, following established qualitative analytical procedures. Thematic analysis allows the researcher to identify patterns, categorize findings, and derive themes that explain how and why local content–based SEO influences digital performance. The analysis followed several steps: (1) data familiarization, (2) coding, (3) categorization, (4) theme generation, and (5) interpretation of themes in relation to the research objectives (Pulizzi & Barrett, 2009). This analytical method is considered state-of-the-art in qualitative research due to its flexibility and its ability to generate theoretically grounded insights from diverse data sources. Themes were further cross-validated using multiple data points (interview, observation, documents) to ensure analytical rigor.

RESULT AND DISCUSSION



The findings derived from interviews, observations, and performance data demonstrate that Lezza Studio implemented a structured five-stage model of local content–based SEO. The stages included: (1) Local Keyword Identification, (2) On-Page Optimization, (3) Local Narrative Content Creation, (4) Visual Media Optimization, and (5) Continuous Adaptation. This integrated approach successfully aligned the studio’s digital content with local search behavior and cultural relevance, thereby improving visibility and audience engagement (Giunchiglia et al., 2020).

1. Search Visibility

The implementation of localized keywords—particularly “kaos custom ramah lingkungan Manado”—resulted in a substantial increase in search visibility. According to Google Trends monitoring, this keyword dominated local search results and reached peak popularity within three months. This indicates that precise keyword targeting, combined with culturally grounded content, significantly enhanced Lezza Studio’s ranking performance and discoverability among local consumers (Giunchiglia et al., 2020).

2. Organic Traffic Growth

The improvement in visibility translated directly into increased organic traffic across multiple platforms. Social media analytics revealed a 104% increase in Facebook profile visits and a 57% increase in Instagram visits compared to the previous two months. These results confirm that optimized, locally tailored content not only enhanced search performance but also stimulated cross-platform engagement (Pulizzi & Barrett, 2009).

3. Consumer Conversion

Higher visibility and traffic positively influenced consumer behavior. Internal data reported a 25% increase in product orders following the SEO implementation period. This

indicates that localized content and optimized call-to-action elements were effective in driving purchasing decisions and converting online visibility into tangible business outcomes (Pulizzi & Barrett, 2009).

4. Strategy Sustainability

Lezza Studio consistently updated its product designs and visual content with local environmental themes. This sustained adaptation ensured continued relevance in search engine algorithms and maintained consumer interest over time. Regular content updates also strengthened audience loyalty by reinforcing brand consistency and environmental values (Pulizzi & Barrett, 2009).

Aspects	Indicators	Measurement Approach	Result
Search Visibility	Local Keyword Search	Google Trends	The keyword “kaos custom ramah lingkungan Manado” dominated the results, reaching the highest search peak within three months.
Organic Traffic	Number of Organic Visits	Social Media Insight	Facebook profile visits increased by 104% compared to the previous two months, and Instagram visits rose by 57%.
Consumer Conversion	Number of Order	Internal SME Data	Orders increased by 25%.
Strategy Sustainability	Consistency of Design and Content Updates	Design Update Schedule	Updated environmentally friendly local designs

Overall, the combined improvements in visibility, traffic, conversion, and sustainability illustrate that the local content–based SEO model is effective, practical, and replicable for environmentally friendly MSMEs operating in similar contexts. By integrating local search intent, culturally resonant narratives, and visual optimization, the model offers a holistic pathway for strengthening digital presence (Giunchiglia et al., 2020).

CONCLUSION

The study demonstrates that a structured local content–based SEO approach can significantly enhance the digital visibility and business performance of environmentally friendly MSMEs. Through the five-stage model implemented by Lezza Studio, notable improvements were recorded in search visibility, organic traffic, and customer conversions. The model’s effectiveness lies in its ability to combine technical SEO practices with localized cultural relevance, providing a competitive advantage for small enterprises operating in regional markets (Barney, 1991). The findings confirm that local keyword alignment, narrative-based content, optimized visuals, and continuous adaptation contribute meaningfully

to long-term digital marketing success. This model provides a replicable framework that other sustainability-oriented MSMEs can adopt to increase their competitiveness in the digital ecosystem (Pulizzi & Barrett, 2009).

Despite its contributions, the study has several limitations. First, the research is based on a single case study, which limits the generalizability of findings to other MSMEs operating in different sectors or geographic regions. Second, the qualitative design relies heavily on the accuracy and completeness of interview responses, observations, and internal documents, which may introduce subjective bias. Third, the study focuses on short-term SEO outcomes observed during the implementation period; long-term performance fluctuations influenced by algorithm changes, competition, or market shifts were not fully captured. Lastly, the research does not incorporate quantitative metrics such as statistical comparisons or controlled experiments that could further validate the causal impact of the SEO model.

The findings carry important theoretical and practical implications. Theoretically, the study expands the understanding of SEO by demonstrating that local cultural content—often overlooked in standard optimization models—plays a strategic role in shaping user engagement and search relevance, particularly in diverse markets like Indonesia. Practically, the results highlight the necessity for sustainable MSMEs to adopt SEO strategies that not only address technical factors but also reflect local identity, language, and consumer behavioral patterns. For policymakers and development institutions, the model underscores the importance of integrating localized digital marketing training into MSME empowerment programs, especially for enterprises with limited digital skills and resources.

Based on the findings, several recommendations can be proposed. For MSME practitioners, it is recommended to: (1) continuously refine keyword strategies to align with evolving local search behavior; (2) integrate regional narratives and culturally relevant stories into digital content; (3) maintain consistent technical optimization across all digital platforms; and (4) monitor digital analytics regularly to guide iterative improvements. For researchers, future studies should employ mixed-method or multi-case designs to broaden empirical validation and measure the long-term effectiveness of localized SEO strategies. For policymakers and ecosystem enablers, it is advised to develop targeted digital training modules, financial support schemes, and accessible SEO toolkits to help environmentally friendly MSMEs strengthen their competitiveness in the digital marketplace.

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