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**PERFORMANCE OF AI GENERATED CONTENT IN CONTENT
MARKETING**

Master's thesis

MA International Business Administration

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I hereby declare that I have compiled the thesis independently and all works, important standpoints, and data by other authors have been properly referenced and the same paper has not been previously presented for grading.

The document length is 8675 words from the introduction to the end of the conclusion.

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ABSTRACT

This study investigates the performance of AI-generated content in comparison to human-written content. By employing the SMCR&AIDA models, the study evaluates the performance of content from both sources using marketing performance metrics across emails, blog posts, and landing pages. Additionally, the study relies on the TAM model and evaluates the perceptions of the usefulness of AI content among both writers and readers.

Four separate experiments were conducted, including a survey of professional writers to understand their perception and usage of AI content and tools. The findings indicate that AI-generated content can be competitive with human-written content in certain contexts and users are unable to accurately differentiate between the two. Additionally, professional writers find AI content to be effective, credible, and high-quality while acknowledging its limitations.

From a managerial perspective, the study suggests that content managers and marketers should consider integrating AI-generated content into their strategies to improve efficiency and cost-effectiveness. This research contributes to the growing body of literature on AI-generated content performance and provides a foundation for future investigations in this area.

Keywords: AI-generated content, AI in marketing, performance testing,

INTRODUCTION

After the emergence of digital marketing, content marketing has become a key to successful online campaigns (Blates,2015). However, creating original content for marketing purposes is expensive and time-consuming because it involves extensive research, data collection, and skillful writing that provides meaningful information to the audience and keeps them engaged.

On the other hand, the development of advanced natural language processing (NLP) models has opened up new possibilities for using artificial intelligence (AI) for writing a variety of content as they enable AI to write like humans (Schweidel, Reisenbichler, Reutterer & Zhang, 2023). For instance, companies are using AI for making documentaries and creating content for journalism (Segarra-Saavedra, Cristòfol & Martínez-Sala, 2019).

Moreover, in the context of content marketing, recent research found that tools such as ChatGPT can assist marketers in generating content more quickly, potentially achieving quality on par with human content creators (Rivas & Zhao, 2023) while another expert states AI-generated content to be faster, cost-effective, and with better Search Engine Optimization (SEO) capabilities (Taylor, 2023). Tang (2021) also considered AI algorithms to be excellent at carrying out routine, rule-based writing tasks more efficiently than human writers.

However, despite the possibilities and the increasing use of AI technology in content marketing, there is limited research on the performance of AI-generated content in comparison to human-generated content. The main problem this study addresses is this knowledge gap.

This study aims to investigate the performance of AI-generated content in content marketing through A/B testing experiments for blog posts, emails, and landing pages in a real-world scenario using AI-generated and human-written content. Metrics such as click-through rate (CTR), conversions, open rates, and other relevant metrics (Rancati & Gordini, 2014) for each experiment are used to determine the performance of related types of content. Additionally, the study

administered a survey to gather professional writers' perceptions of the effectiveness and limitations of AI-written content and tools.

To provide a comprehensive analysis of the results, this study incorporates the AIDA and SMCR models for understanding the quantitative performance of content and the Technology Acceptance Model (TAM) for exploring professional writers' and readers' perceptions of AI-generated content in terms of effectiveness, content quality, and credibility.

The academic contribution of this study is to advance the understanding of AI-generated content's performance in content marketing across 3 different content types. Managerially, it can help businesses make more informed decisions about incorporating AI-generated content in their content marketing strategies. This knowledge can lead to lower content marketing costs, improved marketing outcomes, such as higher audience engagement and conversion rates, and potentially more efficient use of resources.

Research Questions:

RQ: What is the performance of AI-generated content in Content Marketing?

Sub-RQ1: How does AI-generated content compare to human-written content in terms of CTR, conversion rates, engagement rates, and open rates?

Sub-RQ2: How do readers perceive AI content in terms of effectiveness, content quality, and credibility in comparison to human-written content?

Sub-RQ3: Are readers able to differentiate between AI-generated and human-written content on the web?

Sub-RQ4: How do professional writers perceive AI-generated content regarding effectiveness, credibility, and content quality?

1. LITERATURE REVIEW

1.1. Content Marketing

In the highly competitive digital landscape of the 21st century, businesses constantly seek effective ways to stand out and connect with their target audiences. As a powerful tool for achieving this, content marketing has gained prominence, with a recent survey conducted by Stahl (2022) revealing that 71% of B2B marketers believe content marketing has grown in importance for their organization over the past year. Although content marketing has historical roots, it has evolved considerably over time and now encompasses a wide array of formats and approaches to cater to diverse industries and objectives (Pulizzi, 2013; Forecey, 2022; Gokhale, 2016; Harris, 2017).

“Content marketing is a strategic marketing approach focused on creating and distributing valuable, relevant, and consistent content to attract and retain a clearly defined audience, ultimately driving profitable customer action” (Content Marketing Institute, n.d.). This customer-centric approach aims to provide value and relevance to audiences. Resultantly, helping businesses achieve desired results, such as raising brand awareness, generating leads, converting leads into customers, establishing themselves as industry leaders, engaging with customers, retaining customers, increasing website traffic, and boosting sales (Gokhale, 2016).

Poradova (2019) asserts that content marketing is the sum of all modern online marketing strategies, indicating its significance in digital marketing. This evolution has led to the diversification of content marketing formats, including blog posts, case studies, ebooks, webpages, community forums, podcasts, videos, infographics, templates, and emails (Forecey, 2022; Gokhale, 2016; Harris, 2017). However, the choice of content type depends on the industry and the objectives of the business. For example, a company selling toys for kids may use blog posts explaining product benefits and videos showing actual products or people using them, while a brand selling organic skincare products might also employ podcasts, case studies, or community forums to educate consumers.

1.2 Overview of AI & generative models

To comprehend the evolution of generative AI, which enables the production of human-like text, image generation based on textual inputs, and more, it is essential to examine AI and its associated sub-fields, including machine learning (ML), deep learning (DL), natural language processing (NLP), and other generative AI models.

Artificial Intelligence (AI) was first introduced by John McCarthy in 1956 (Bini, 2018) and has since branched into various sub-fields, including ML and DL (LeCun, Bengio, & Hinton, 2015). ML focuses on developing algorithms and techniques that allow computers to learn from and make predictions or decisions based on data without explicit programming (Alpaydin, 2020). As a subset of ML, DL utilizes multi-layered artificial neural networks to capture complex patterns within datasets (LeCun et al., 2015).

Generative AI (GenAI) is a subfield of AI that specializes in creating various data types, such as images, videos, audio, text, and 3D models (GenerativeAI, n.d.). Within GenAI, Natural Language Processing (NLP) is the area that concentrates on enabling computers to understand, interpret, and generate human language (Chopra, Prashar, & Sain, 2013). Natural Language Generation (NLG) is a subtask under NLP that involves creating natural language text that fulfills specific communication objectives (Dong et al., 2022).

NLP has played a significant role in the development of powerful language models, such as GPT (Radford et al., 2018), GPT-2 (Radford et al., 2019), GPT-3 (Brown et al., 2020), and the latest GPT-4 model (OpenAI, 2023). Pre-trained transformer-based models (GPT) trained on extensive datasets introduced by OpenAI (Radford, Narasimhan, Salimans, & Sutskever, 2018) have been the real game-changers in the field of AI-generated text.

In the realm of AI image generation, Generative Adversarial Networks (GANs) and Variational Autoencoders (VAEs) are the most common frameworks used today. GANs involve competition between two machine learning models that are typically built using neural networks. One generates fake data similar to real data and the other model tries to differentiate real from fake (Goodfellow et al., 2020). VAEs use a neural network to understand patterns within input data and create new images by drawing examples from these identified patterns (Kingma & Welling, 2013). Prominent AI image generation models include Midjourney V5 (Midjourney, 2023), DALL-E 2 (Marcus,

Davis, & Aaronson, 2022), and Stable Diffusion (Rombach, Blattmann, Lorenz, Esser, & Ommer, 2022).

To sum it up, generative AI has evolved rapidly, encompassing various sub-fields that have enabled advances in AI content generation. Understanding the development and capabilities of these generative models is crucial for exploring their potential applications in diverse domains, including content marketing.

1.3. Role of AI in marketing

Over the last decade, AI has emerged as a significant driving force within the marketing sector, offering immense potential for a variety of tasks ranging from personalizing business communication to identifying well-performing promotions and uncovering new or missing information distribution channels (Stone et al., 2020).

AI's anticipated impact on marketing and communications is substantial, with 55% of CMOs expecting it to be more influential than social media (Weber Shandwick, 2016). With the widespread adoption of AI, consumer purchase and consumption patterns will be readily available, making the real business competition about the processing qualities and capabilities of AI systems (Vishnoi, Bagga, Sharma, & Wani, 2018).

Examples of AI in marketing include Amazon's use of drones for delivery automation through Prime Air, Macy's use of NLP for in-store personal assistant services, and Replika, a chatbot offering emotional support by imitating users' communication styles (Huang & Rust, 2021). To harness AI's potential in marketing, Paul Roetzer, CEO of Marketing AI Institute, introduced the 5Ps of the Marketing AI framework (Roetzer, 2017).

AI's impact on marketing is evident in various functions and approaches, such as campaign optimization, content personalization, customer segmentation, task automation, content generation, and sentiment analysis on social media.

Campaign optimization is crucial in digital marketing (Alsoud et al., 2023), allowing marketers to allocate funds to cost-effective activities that yield desired results. Machine learning-powered tools

like Google Analytics provide insights into customer journeys, user behavior, and campaign performance, enabling marketers to optimize campaigns and maximize return on investment (Gaur, Singh, & Kumar, 2016).

Personalization is central to modern algorithmic tools, as our purchases, news consumption, music preferences, and other aspects of daily life increasingly rely on tailored recommendations (Kotras, 2020). For instance, Netflix uses algorithms to provide users with content that aligns with their preferences (Gomez-Urbe, & Hunt, 2015), while TikTok's recommendation system curates videos based on various factors, contributing to its success as a social media platform (Boeker, & Urman, 2022).

Advancements in AI have led to the creation of tools that generate new content for marketing purposes more efficiently than humans, such as writing product descriptions, social media posts, and SEO-optimized content for higher search rankings (Tang, 2021; Schweidel, Reisenbichler, Reutterer & Zhang, 2023).

Customer segmentation involves dividing customers into distinct groups based on behavioral similarities (Kansal, Bahuguna, Singh, & Choudhury, 2018). AI segmentation offers flexibility by treating each customer as a unique segment or combining dispersed long-tail groups into a single segment (Huang & Rust, 2021), enabling marketers to tailor messages and product offerings accordingly.

Sentiment analysis helps marketers understand users' feelings about a company or its products (Taherdoost & Madanchian, 2023). Companies increasingly use AI-powered sentiment analysis to comprehend customer feedback, service issues, social media mentions, and employees' feelings and thoughts (Taherdoost & Madanchian, 2023).

In conclusion, AI has a significant role in shaping modern marketing strategies and offers a myriad of opportunities for marketers to optimize their campaigns, personalize content, segment customers, automate tasks, generate content, and analyze sentiments. As AI technology continues to advance, its impact on marketing will only grow.

1.4. Performance comparison

In terms of KPIs, scholars have relied on subjective assessments due to the absence of widely recognized and consistent objective measures for evaluating the efficacy of content marketing (Koob, 2021). However, Rancati & Gordini (2014) provided quantitative metrics and categorized these metrics into four categories; “Consumption, Sharing, Lead Generation, and Sales Metrics”. The metrics under each category used in the literature are explained in Table 1.

Table 1. Content marketing metrics & their categories

Category	metrics
Consumption	page views
	downloads
	visitors
	time on page
	social chatter
Sharing	likes, shares, tweets
	email forwards
	inbound links
Lead generation	form completion
	email, newsletter, blog subscriptions
	blog comments
	cookies
	RSS feed
	conversion rate
Sales metrics	online and offline sales
	customer retention
	cost saving
	content marketing ROI

Source: Adapted from Rancati and Gordini (2014).

In addition to these, experts also use the tone of voice, grammar, writing style, in-depth topic coverage, and command of language as measures to evaluate the quality of content in marketing (SEMrush, 2021).

The combination of these metrics can be used to assess the effectiveness of content marketing campaigns based on their objective. For instance, in case the goal of a campaign is to generate new leads for an online education company, that company can use metrics such as form completion or email & newsletter subscriptions to understand whether the campaign was effective or not.

1.5. SMCR & AIDA

In the context of this study, two prominent models have been chosen to analyze the performance of AI-generated content in content marketing in comparison to human-written content. These models are the Sender-Message-Channel-Receiver (SMCR) model and the AIDA model.

SMCR model also known as Berlo's model of communication (Muyanga & Phiri, 2020), states that there are 4 key components of effective communication; source, message, channel, and receiver. Furthermore, the model highlights the significance of each component in effective communication and suggests that any disruption or weakness in any of these components can lead to miscommunication or failure in achieving the desired communication objectives (Berlo, 1960). In recent years, the model has been used widely in the literature for understanding the dynamics of marketing and communication studies (Sutanto, 2016; Dhar & Bose, 2016; Pornsuksawat & Kheokao, 2019; Rubino, Tian, & Pelkki, 2022).

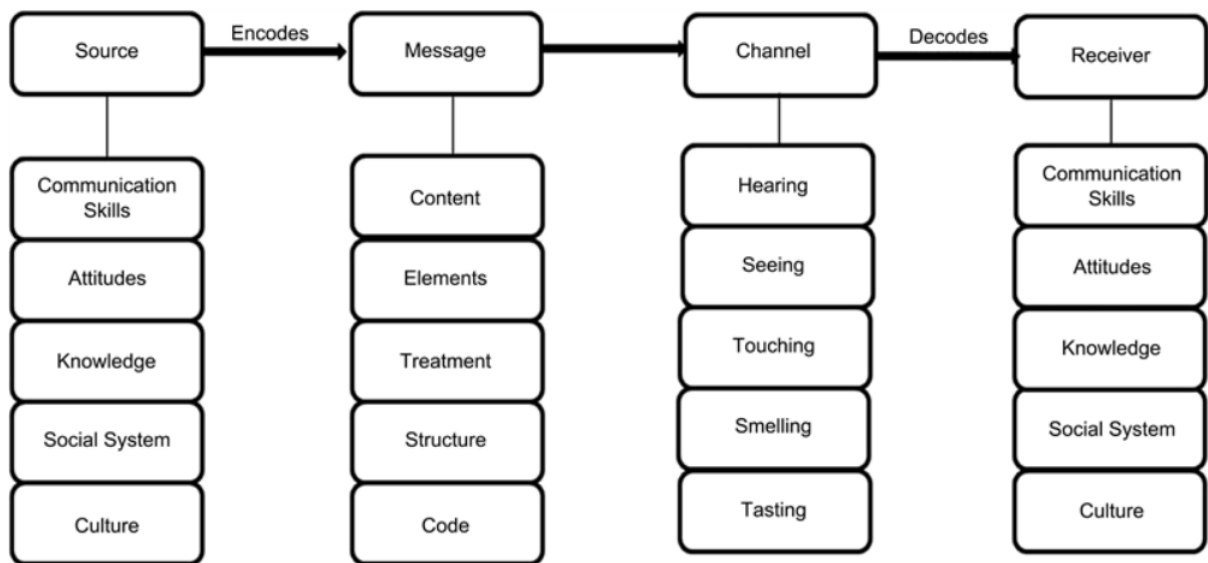


Figure 1. SMCR Model
Source: Berlo (1960)

The AIDA Model stands for A-attention, I-interest, D-desire, and A-action. That outlines a consumer's cognitive journey that progresses through four primary stages from gaining attention to taking the desired action (Lewis, 1908). Using this model, marketers can develop effective marketing campaigns by guiding consumers through four psychological stages, transitioning from a lack of awareness to tangible purchases (Ghirvu, 2013).

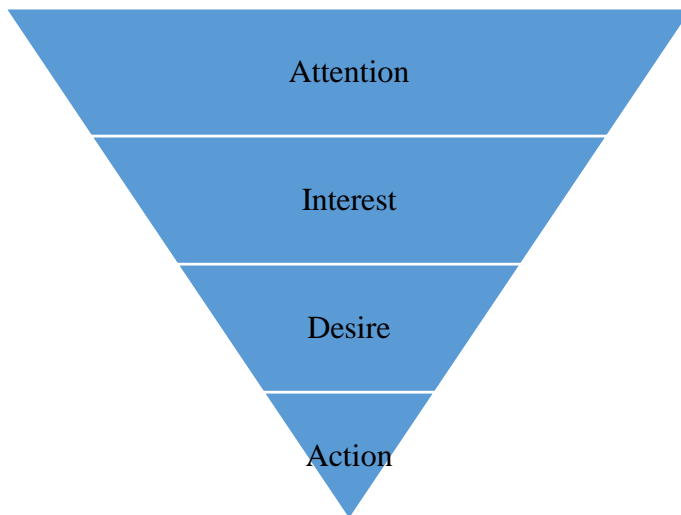


Figure 2. AIDA model
Source: Adoption based on Lewis (1908)

In relation to marketing, the model has been used widely in literature for understanding and enhancing social media performance (Hassan, Nadzim & Shiratuddin, 2015; Mumtaz, 2019) to comparing different marketing campaigns (Rehman, Nawaz, Ilyas & Hyder, 2014) and tourism websites (Prathapan, Sajin Sahadevan & Zakkariya, 2018).

1.6. Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), proposed by Davis (1985), is a dominant widely used theoretical framework for understanding the factors that influence the adoption and use of technology (Marangunić & Granić, 2015). This model focuses on perceived usefulness and perceived ease of use as two main determinants of technology acceptance.

Researchers have used this model to explain the adoption of new technologies in both business and social aspects such as the acceptance of viral marketing (Aghdaie, Sanayei, & Etebari, 2012), the adoption of e-learning (Ibrahim et al., 2017), and social media usage (Rauniar, Rawski, Yang, & Johnson, B, 2014). While some researchers found it to be very effective (King & He, 2006), others found it to be lacking in extensive and thorough research (Chuttur, 2009; Legris, Ingham, & Colletette, 2003).

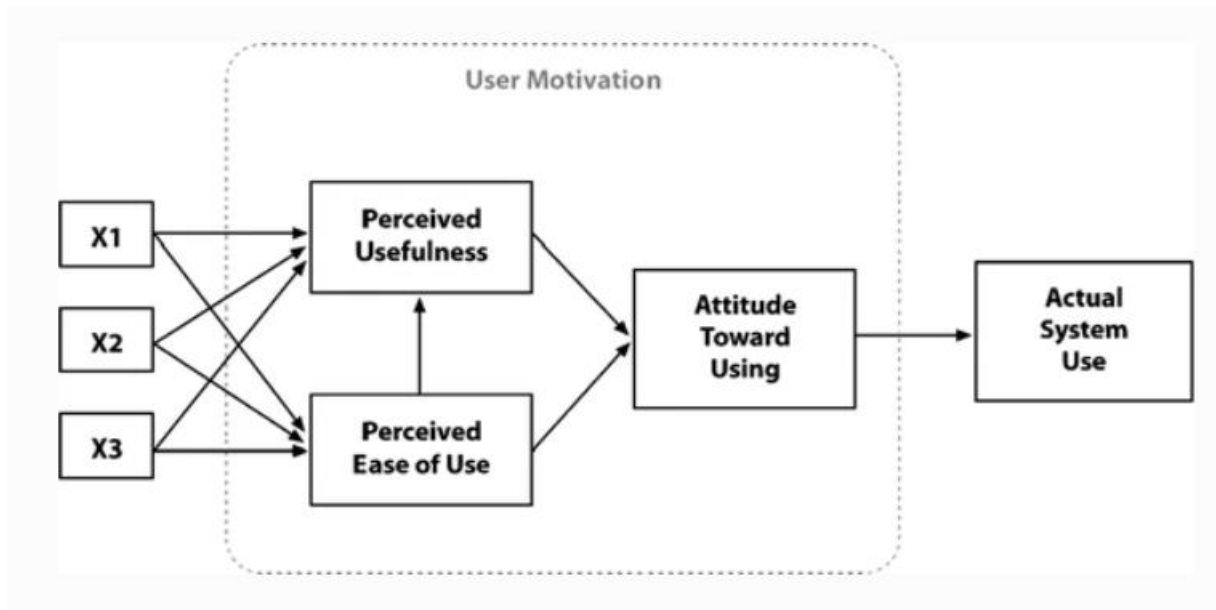


Figure 3. Technology Acceptance Model
Source: Davis (1985)

The application of TAM in this study offers a structured and theoretically grounded approach to understanding the acceptance and adoption of AI-generated content among professional writers and readers. By relating the key factors of interest to the established constructs of Perceived Usefulness and Perceived Ease of Use, this study provides valuable insights into the potential barriers and facilitators of AI-generated content adoption in content marketing, contributing to both academic knowledge and managerial practice.

2. METHODOLOGY

The objective of this study is to analyze and understand the performance of AI-generated content in comparison to human-written content in content marketing. To achieve this objective, the author has analyzed AI-generated content from different perspectives and using different content types.

Consequently, this study employs a multi-faceted methodology and the research design consists of 4 distinct yet complementary experiments involving diverse participant groups. These experiments include A/B testing for three different types of content; blog posts, Emails & landing pages, along with an online questionnaire to professional writers and marketers in order to gather their perception of the effectiveness of AI-generated content.

A/B testing, also known as controlled experiment and split testing, is a widely accepted method for measuring the performance of different content variations to determine which version resonates better with the target audience (Kohavi, Henne, & Sommerfield, 2007).

In content marketing, it has been used widely to compare two or more versions of elements such as headlines, social media posts, emails, web versions, and more to understand which one performs better (Yang & Hayashi, 2021; Feit & Berman, 2019; Turunen, 2021; Hagar & Diakopoulos, 2019).

Figure 1. shows the basic structure for A/B testing by Yang & Hayashi (2021).

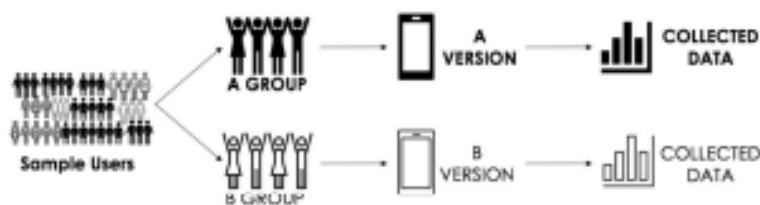


Figure 4. The basic structure of A/B testing.
Source: Yang & Hayashi (2021)

For this research, A/B testing will be used to compare the performance of different types of content in content marketing such as emails, blog posts, and landing pages based on a variety of marketing metrics. The structure for that is shown in Figure 5.

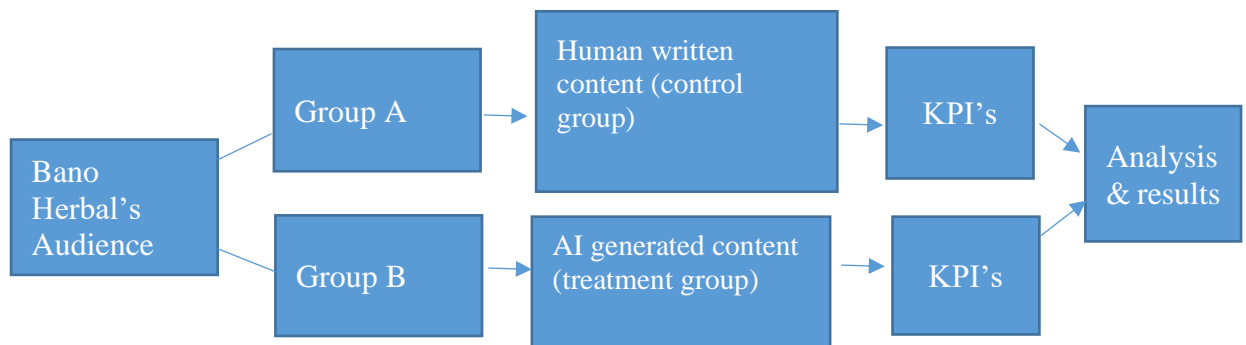


Figure 5. A/B testing structure for this study

Source: Author's adaptation of A/B testing structure provided by Yang & Hayashi (2021)

To allow for direct comparison as per the A/B testing method, each experiment – Blog posts, Facebook Ad + Landing page, and Email - has two versions. One version is written by AI while the second version is written by a human. All the content for these 3 experiments has been developed following the brand's target audience, messaging, and values.

In order to ensure writers do not use AI to write content for the experiments, clear instructions as well as the intent for which the content will be used were provided. Additionally, all the content meant to be written by human writers was assessed using AI content detection tools and it was ensured that the content meets the requirements for the experiments.

The rationale behind choosing different types of content (blog posts, emails, landing pages) and conducting 3 different experiments includes the following reasons;

1. Each of these content types serves a specific purpose in the overall content strategy. Therefore, using different types of content to assess the effectiveness can help to identify the strengths and weaknesses of AI-generated content in different contexts.
2. To gain a more comprehensive understanding of the effectiveness of AI-generated content in content marketing
3. To reduce potential biases and limitations associated with using a single approach

Furthermore, for the first 3 experiments, Bano Herbal which is a small home-based herbal skin care products manufacturer from Pakistan was used to ensure that the research is anchored in the real-world context and that the findings are more relevant and applicable to content marketing practices.

Table 2. The research design for the performance of AI-generated content in content marketing

Object	activity	target group	metrics
Performance comparison	blog posts + questionnaires	Bano herbal's target audience proxies	engagement metrics questionnaire
Performance comparison	ads + landing page	potential customers who have interacted online with Bano's previous ad	CTR Avg. time on page engagement rate conversion rate
Performance comparison	promotional emails	Bano herbal's email subscribers	open rate CTR conversion rate
Perception about the effectiveness of ai generated content	online questionnaire	professional writers	questionnaire

Source: Author's Analysis

By implementing this comprehensive framework, the goal is to obtain an in-depth understanding of the performance of AI-generated content in the context of content marketing.

In the following sections, the author has outlined each experiment, providing information on the procedures used, the participants involved, and the data collection & analysis techniques that were applied. This comprehensive overview of the methodology will make it easier to replicate the study for future researchers. Furthermore, it will promote transparency throughout the research process, and enable a thorough evaluation of the results.

2.1. Blog post content experiment

To understand the effectiveness of AI-generated blog posts, A/B testing was performed using 2 blog posts, one written by a human writer and one by AI.

As a part of the experiment, a professional writer was hired and provided with a basic overview of the topic relevant to Bano Herbal's audience rather than giving an outline of what to include. On the other hand, ChatGPT with GPT4 (the latest natural language processing model developed by

OpenAI that was released on March 14, 2023) was used and provided with a base prompt that had similar information to what was provided to the writer. The prompt also included information about the writing style, word limit, and other structural information to ensure the AI written content is in the form of a blog post and has an appropriate structure.

Once both versions of the blog were ready, they were published on Bano Herbal's website and were presented to 40 different people with similar characteristics to the target audience of Bano Herbal via links inside the questionnaire. That allowed the author to not only measure responses about the blog's effectiveness, content quality, and credibility but also made it possible to measure qualitative metrics such as engagement rate, events per session, event count, etc. The UTM parameters were used to differentiate between the traffic from both blog posts. Though it helped to achieve the objective, however, small discrepancies were observed in the collected data which point out the limitations of UTM parameters for tracking.

The questionnaire was divided into five sections with the first section comprising two demographic questions (e.g., age and gender). Sections 2, 3, and 4 each contained four questions focused on effectiveness and its two sub-sets; content quality and credibility, using the Likert scale (Kim et al., 2020; Haim & Graefe, 2017; Liaw & Huang, 2013). The last section had only one question, which asked participants to rate their perception of the author, also measured by the Likert scale. Furthermore, the questionnaire had two versions with the same questions but each led to a different blog post.

All the respondents were randomly presented with one blog post using QR codes in a way that in the end, 20 people received the AI blog post and 20 received the blog post that was written by a human. Once they had read it, they were asked to share their perception of the effectiveness, content quality, credibility, and likelihood of content being written by humans or AI via the questionnaire. None of the readers knew beforehand whether the blog post presented to them is written by a human writer or AI.

On the one hand, this approach allowed the author to collect interaction data, such as page views and average session duration, for both blog posts. On the other hand, it enabled the author to gather valuable insights from readers about the effectiveness, credibility, and content quality of both blog posts through the questionnaire, providing us with data for comparison.

The subsequent statistical tests were utilized to examine the data; independent sample t-test, and chi-square test.

To compare average ratings concerning effectiveness, content quality, and credibility between AI-generated and human-written content, the Independent Samples t-test was employed. This test was chosen due to its ability to compare the means of two distinct groups—those exposed to AI-generated content and those exposed to human-authored content.

The Chi-square test was applied to assess whether participants could differentiate between AI-generated and human-authored content. The rationale for choosing this test lies in its ability to analyze the association between two categorical variables: the respondents' perception of the content's author and the actual author.

2.2. Facebook ads & landing pages performance comparison

While the audience's perception of AI-generated content and being able to differentiate is one thing, understanding how the users interact with the content when presented to them in a real-world scenario is another. Therefore, the idea of A/B testing was applied to landing pages to assess the effectiveness of AI-generated content against human-written content in terms of consumption and sales metrics (Rancati & Gordini, 2014).

Furthermore, an underperforming product "Onion Oil" was chosen rather than a well-known product for two reasons; to mitigate the biases and the potential to create a higher impact. And since the product already had a product page with human-written content from Bano Herbal's in-house writer, content for the second landing page was created using ChatGPT with the GPT4 model. All instructions provided by the AI were followed to the point except for image/video suggestions (due to the unavailability of such content for the product) and client testimonials.

In addition to that, to bring users to the product pages and compare their effectiveness, A/B testing ads were used where two ad copies were created for Facebook ads, following the same human vs AI principle. Both ads had similar visuals and were connected to their respective pages. Additionally, the A/B testing ad was created with the objective to drive traffic to the landing pages.

Both ads were targeting different audience segments to minimize the chance same users seeing both ads.

Moreover, UTM parameters for both landing pages with different campaign and source names were created. That was done to ensure that the traffic to those pages from ads and the website traffic coming to these pages from other sources can be differentiated and that only those visitors that came through the ads to landing pages are counted. Also, to address the cookies tracking limitations, final data from google analytics was considered for analysis.

2.3. Email content performance comparison

In order to evaluate the performance of AI-generated email content in comparison to human-written emails, an experiment was conducted using samples of Bano Herbal's audience. The participants in this study received 2 sets of emails and 4 promotional emails in total. For each set, one of the emails was crafted by an experienced human writer, while the other was generated by AI.

For the first set, the selected promotion was “free delivery” and the chosen sample consisted of 494 people who had not yet made any purchases but had subscribed to receive emails from the company. For the second email group, a bundle deal was selected offering 3 products at a discounted price and with free delivery. This email was sent to a sample of 1025 people who had subscribed to receive emails from the company.

Additionally, for every email, all aspects including the email subject and preview text was also written by the respective writers of the email, whether AI or human. Furthermore, to ensure independence, each email was sent to users after a specified period.

The experiment aimed to determine whether there were any significant differences in the performance of the AI-generated email content compared to the human-written email content. The total number of emails delivered, opened, clicked, and converted were recorded for both the AI-generated and human-written emails. The open rate, click rate, and conversion rate were calculated for each email to compare their performance.

2.4. Online survey for professional writers

In addition to carrying out experiments to evaluate the performance of AI-generated content, an online survey was conducted targeting professional writers. The questionnaire aimed to obtain insights into various aspects of AI-generated content, delving into the writers' viewpoints on the effectiveness, credibility, content quality, and limitations of such content, as well as their experiences with AI-assisted content generation tools in order to evaluate it using the TAM model.

This questionnaire contained 24 questions, divided into seven sections. The first section inquired about demographics, such as age, gender, location, and education. The second section addressed experience and industry, while the third section focused on any AI tools the respondents may have used and how often they utilized them. Lastly, sections 4 through 7 explored the effectiveness, credibility, content quality (Kim et al., 2020; Haim & Graefe, 2017; Liaw & Huang, 2013) and limitations of AI-generated content and tools.

To ensure a diverse sample of respondents, the questionnaire was initially shared using Facebook groups for content writers, online forums, direct messages to writers via LinkedIn, and personal connections. However, the response rate was quite low and resulted in only 18 responses.

To improve the response rate, the author reached out to admins of online communities & Facebook groups and sent reminders to personal connections after one week after the initial contact. As a result, the number of respondents increased significantly to a total of 111. However, 31 respondents left the survey halfway and only 80 people completed it. The overall method ensured that the study includes respondents from different industries and with a wide range of experiences from 19 different countries.

Table 3. Demographic profile of survey respondents

Variable	N (%)
Gender	
Men	54 (67.5%)
Women	26 (32.5%)
Education	
High school diploma or equivalent	4 (5.0%)
Bachelor's	47 (58.8%)
Master's	22 (36.3%)

Source: Author's calculations

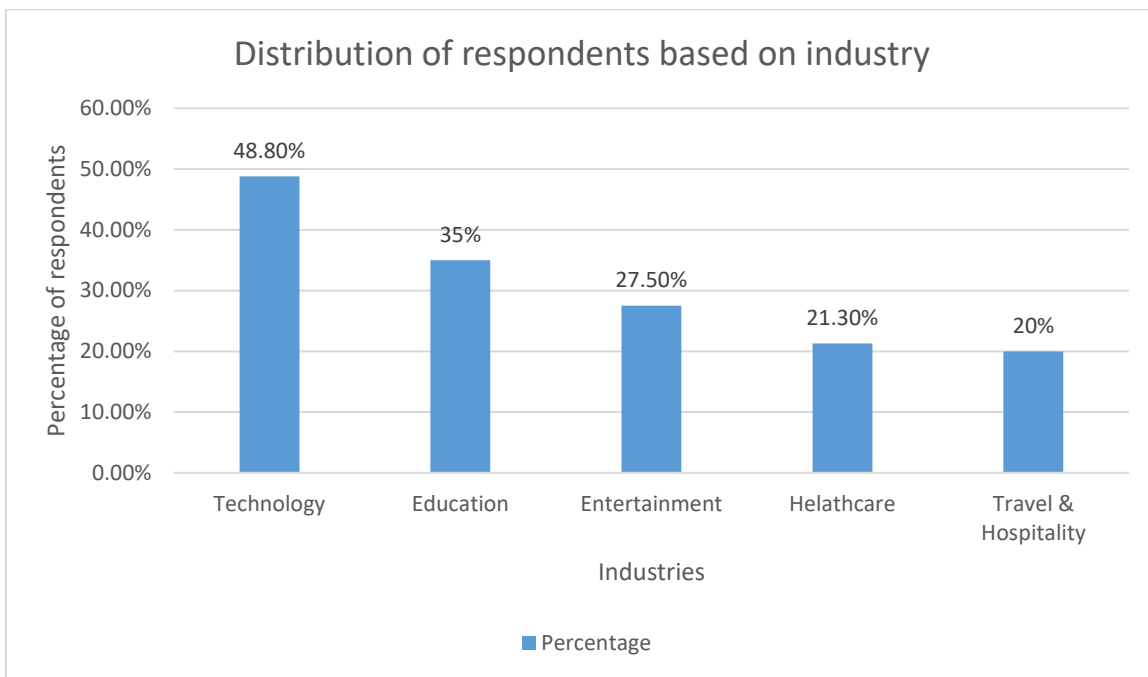


Figure 6. Distribution of respondents based on industry (considers writers who have written for multiple industries).

Source: Calculated by the author

From the above table, it is evident that a majority of the professional writers (67.5%) who responded to our survey are men whereas 32.5% of respondents are women. Moreover, all the writers either have a High school, Bachelor's, or Master's degree. However, the number of writers with a Bachelor's degree (58.5%) is significantly higher than the ones with a Master's degree (36.3%). Only 5% of the respondents have a High school or equivalent degree.

Lastly, in the context of industry, 48.8% of writers write for the technology industry, followed by education at 35%, entertainment at 27.50%, health care at 21.30%, and travel & hospitality at 23.6%.

Furthermore, for easier analysis, the collected data was coded and an average was taken for Likert scale responses of all variables related to effectiveness, credibility, content quality, and limitations separately to create these new variables for each metric and to conduct statistical tests using SPSS. These tests included descriptive statistics, Spearman's correlation, and the Kruskal-Wallis H test. The purpose of these tests was to determine the relationships between the variables and understand how they affect each other.

3. RESULTS

3.1. Combined conceptual model of SMCR & AIDA

In the context of this study, the source in SMCR represents AI-generated content and human-written content. The distinction between these sources allows for an investigation into the impact of altering the origin of content on the overall effectiveness of content marketing campaigns. As for the message part, it represents the informational/promotional messages of the Bano Herbal brand. The channel part represents the channels used to deliver those messages such as email, website landing page, etc. and the receiver part represents the audience of the message.

The integration of the AIDA model into the SMCR model at the receiver stage then measures the impact of the message from both sources using KPIs at each stage of the AIDA model, evaluating how the change in the source of content (AI-generated vs. human-written) influences the performance.

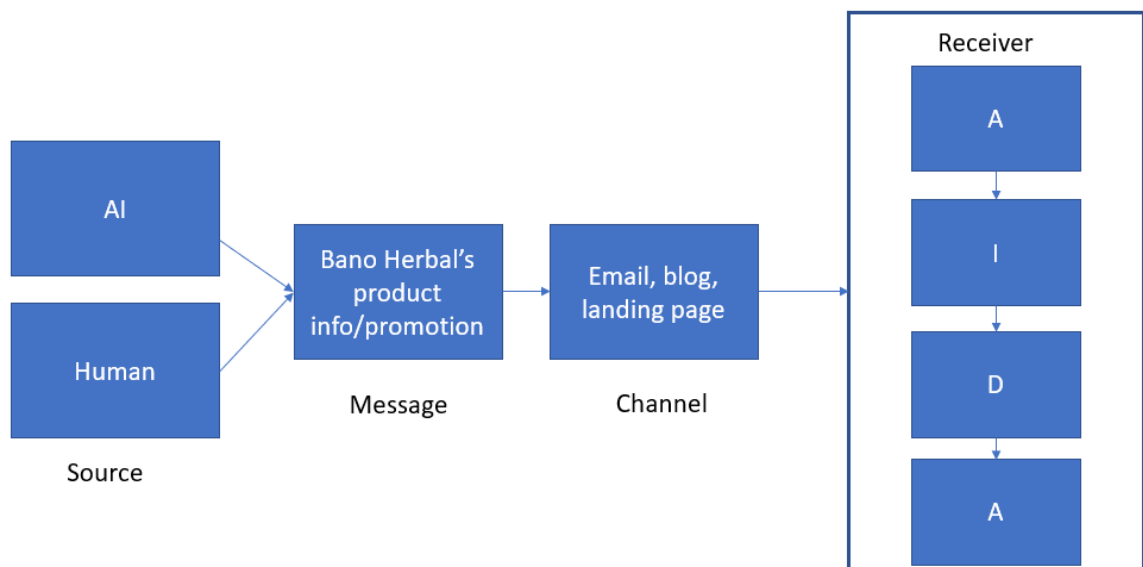


Figure 6. Integration of SMCR & AIDA model for this study
Source: Author's adaptation of SMCR & AIDA models

Performance KPIs related to each AIDA stage are as follow:

- Attention stage - open rates, page views
- Interest stage - click-through rates (CTR), time spent on the page, page views, engagement rate
- Desire stage - Return visits, Number of clicks on call-to-action (CTA)
- Action stage, conversion rates

This combined approach is expected to offer a comprehensive understanding of the quantitative performance of AI-generated content in comparison to human-written content in content marketing and contribute to the academic and managerial implications of the research.

3.2. TAM conceptual model for perception of writers and readers

In this study, Technology Acceptance Model (TAM) has been used as a theoretical framework to understand the perceptions of professional writers and readers regarding AI-generated content. The model's key constructs, Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) have been adapted to capture the specific factors relevant to written content in content marketing.

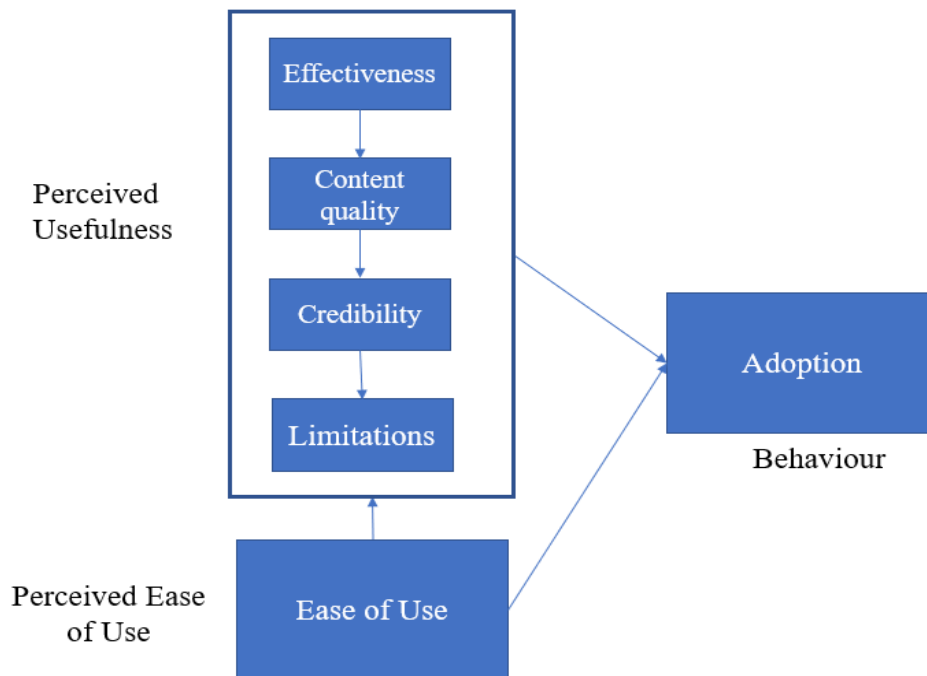


Figure 7. TAM for the perception of professional writers
Source: Author's adaptation of the Technology Acceptance Model for the perception of professional writers

In the context of this study, TAM is used to examine the perceptions of professional writers regarding the effectiveness, credibility, content quality, and limitations of AI-generated content, providing insights into their acceptance and potential adoption of AI-generated content in their work. For professional writers, Perceived Usefulness includes their perceptions of the effectiveness, content quality, credibility, and limitations of AI-generated content. These factors represent the writers' overall evaluation of the usefulness of AI-generated content in meeting their objectives.

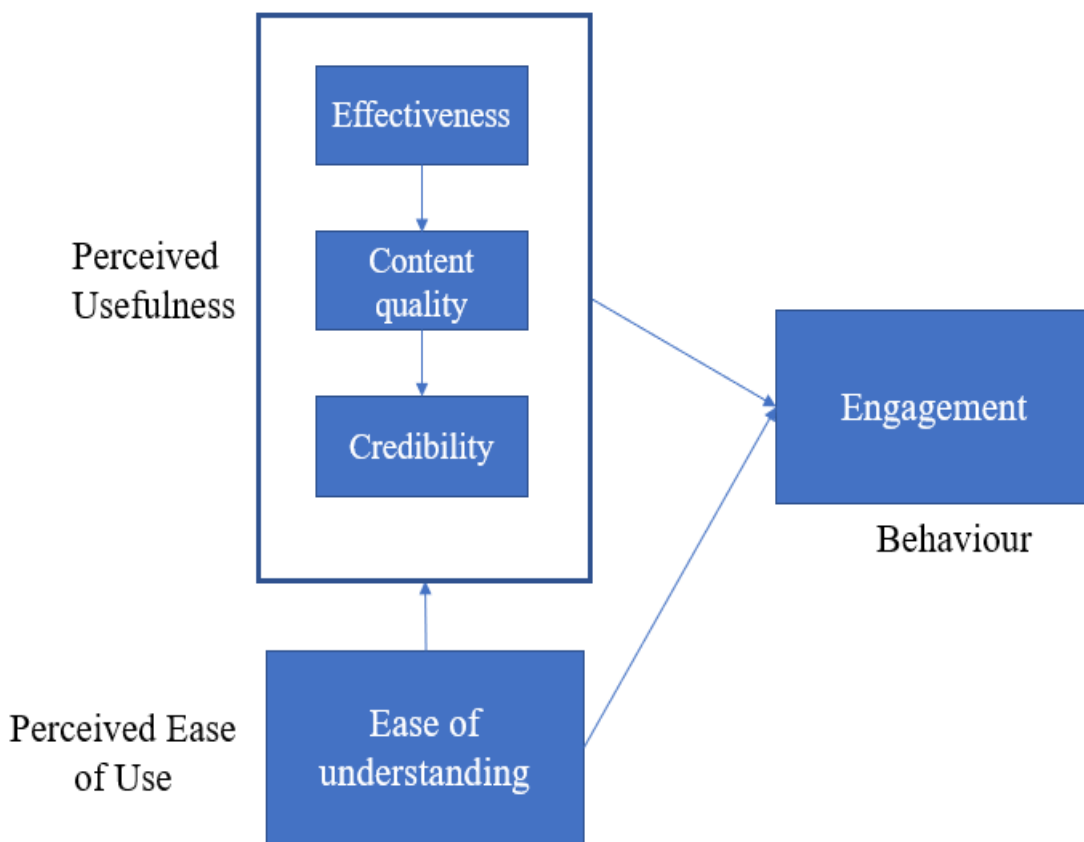


Figure 8. TAM for the perception of readers
 Source: Author's adaptation of TAM for the perception of readers

For blog posts, TAM is used to examine the perception of readers about effectiveness, content quality, and credibility for both blog posts as to whether there is a difference and its impact on satisfaction. In the case of readers/potential customers, Perceived Usefulness captures their perception of the effectiveness, quality, and credibility of AI-generated content. By analyzing readers' evaluations of AI-generated content, it is possible to understand how they perceive the utility of such content in meeting their informational and entertainment needs and whether engage with the content and find it satisfactory or not.

3.3. Blog post content experiment results

The analysis of the data from blog posts data provided the author with significant insights related to the performance of AI-generated blog posts in comparison to human-written blog posts. Since the blog post data was measured from both an analytics perspective and via a questionnaire, it was analyzed separately to draw significant conclusions. Table 4 provides results from the google analytics platform for both blog posts.

Sub-RQ1: How does AI-generated content compare to human-written content in terms of CTR, conversion rates, engagement rates, and open rates?

Table 4. Google analytics results for blog posts.

Content source	average engagement time per session	engaged sessions per user	events per session	engagement rate %	event count
AI-generated	134.42	1.05	8.58	100%	163
Human-written	87.67	1.12	6	90.48%	150

Source: Author's calculation

Based on these results, AI-generated blog post had 53.3% higher engagement time, 9.52% higher engagement rate, and more events per session compared to the human-written blog post. Since both of the blog posts were meant to be informational, their conversion rates were 0%. From AIDA's perspective, higher engagement time, more events per session, and higher engagement rate suggest that AI-generated content was more effective at capturing readers' attention and maintaining their interest.

Sub-RQ2: How do readers/customers perceive AI content in terms of effectiveness, content quality, and credibility?

To answer Sub RQ2, independent Samples t-tests were conducted to compare average ratings for effectiveness, content quality, and credibility between AI-generated and human-written content. The results of the Independent Samples t-tests for effectiveness, content quality, and credibility are presented in Table 5.

Considering the significance level (0.05) for the t-test, there were no significant differences between the AI-generated and human-written blog posts in terms of effectiveness ($p = 0.638$), content quality ($p = 0.844$), and credibility ($p = 0.089$).

Table 5. Independent samples t-test for effectiveness, content quality, and credibility of blog posts

Variable	group	mean	standard deviation	degrees of freedom (df)	t-value	p-value (significance)
Effectiveness	AI	3.8500	0.72275	38	-0.475	0.638
	Human	3.9625	0.77492			
Content Quality	AI	4.5000	0.65895	38	0.198	0.844
	Human	4.4625	0.53358			
Credibility	AI	3.6750	0.92871	38	1.746	0.089
	Human	3.1250	1.05911			

Source: Calculated by the author

These results indicate that the perceived difference in ratings from readers for effectiveness, content quality, and credibility of AI-generated blog post and human-written blog post is not significant. From the lens of TAM, these survey results suggest that readers found both blog posts similarly useful in terms of effectiveness, content quality, and credibility as there is no significant difference in the results.

Sub-RQ3: Are readers able to differentiate between AI-generated and human-written content on the web?

To answer Sub-RQ3, a Chi-square test was conducted to assess if participants could differentiate between content created by AI and content written by humans. The test compared their perception of the blog post's author (whether they believed it was written by a human) to the actual author (AI-generated or human-written).

Table 6. Chi-square test results for respondents' perception of the author

Test name	degrees of freedom (df)	chi-square value (χ^2)	p-value (significance)
Chi-square test	4	5.399	0.249

Source: Author's calculations

The Chi-square test found no significant correlation between perceived and actual authorship, $\chi^2(4, N=40) = 5.399$, $p = .249$. This suggests that participants were not able to accurately distinguish

between AI-generated and human-written blog posts, and this is consistent with previous studies (Köbis & Mossink, 2021; Graefe et al., 2018).

3.4. Landing page comparison results

The analysis of the collected data revealed several insights about the performance of human-written and AI-generated content in terms of engagement and conversion rates for landing pages. The key metrics for each content source are summarized in the table below:

Table 7. Human VS AI landing pages key metrics results

Content source	engagement rate	conversion rate	avg. engagement time (s)	events per session
Human-written	84.18%	0.60%	19.21	8.72
AI-generated	42.62%	0.00%	19.20	6.74

Source: Author's calculations

The human-written content outperformed the AI-generated content with a 97.37% higher engagement rate. The engagement rate for the human-written content was 84.18%, compared to the AI-generated content's engagement rate of 42.62%. The conversion rate for the human-written content was 0.60%, while the AI-generated content had a conversion rate of 0%. The results from both of these metrics show that a human-written landing page was more effective than an AI-generated landing page.

While analyzing the average engagement time per session, there wasn't any significant difference between content written by a human writer and that generated by AI. This indicates that users spent roughly the same amount of time on each landing page, irrespective of whether the content was written by a person or an AI.

In addition, the metric for events per session demonstrated that users engaged more with human-written content, boasting an average of 8.72 events per session. In contrast, AI-generated content averaged 6.74 events per session. This suggests that users found the human-written content on the landing page more engaging than the one generated by AI.

In conclusion, the human-written content demonstrated superior performance in terms of engagement rate, conversion rate, and user interaction compared to the AI-generated content.

There was no significant difference in the average engagement time per session between the two content types. From the lens of SMCR & AIDA, human-written landing page performed better on all stages of AIDA as compared to AI-generated content. This information addresses Sub-RQ1 of the study, focusing on the comparison between human-written and AI-generated content in terms of engagement and conversion rates for landing pages.

3.5. Email results

Both emails for the email experiment (human-written and AI-generated) were sent using the email app within Shopify for Bano Herbal. The findings from the email experiment are summarized in the table below:

Table 8. A summary of findings from the email experiment

	delivered	opened	open rate	clicked	click-through-rate	converted	conversion rate
Human_email_1	481	84	17.70%	4	0.80%	0	0%
AI_email_1	478	113	23.60%	3	0.63%	1	33.30%
Human_email_2	986	129	13.1%	4	0.41%	0	0%
AI_email_2	996	203	20.4%	4	0.4%	1	25%

Source: Author's calculation

The first AI-generated email was delivered to 478 customers and had an open rate of 23.6%. Against that, the human-written email was delivered to 481 customers and had a slightly lower open rate of 17.46%. This suggests that the AI-generated email was more effective in capturing the recipients' attention from AIDA & SMCR perspectives and had a 33.3% higher open rate.

In terms of CTR (click-through-rate), the human-written email had a CTR of 0.80%, while the AI-generated email had a CTR of 0.63%. This indicates that the human-written email was slightly more successful in driving customer engagement and capturing customer's interest and desire once the email was opened as AI-generated email had a 21.25% lower click-through rate.

As for conversion rate, the AI-generated email had a conversion rate of 33.3%, indicating that one out of the three customers who clicked on the email took the desired action. In contrast, the human-

written email had a conversion rate of 0% which indicated that none of the four customers who clicked on the email made a purchase.

The second AI-generated email was delivered to 996 subscribers and had an open rate of 20.4%. On the other hand, human-written email was delivered to 986 people and had an open rate of 13.1%. Overall, AI email had a 55.73% higher open rate suggesting that AI-generated subject lines and preview text are more effective than human-written counterparts. From the lens of AIDA, AI-generated email was more effective in capturing the audience's attention.

As for CTR, both emails performed almost the same with human-generated email displaying a CTR of 0.41% and AI-generated email having a CTR of 0.4%. However, when it comes to conversion rates, human-written emails showed a conversion rate of 0% as none of the customers who opened the emails made a purchase. On the other hand, AI-generated email resulted in 1 conversion, displaying a conversion rate of 25%. From the SMCR & AIDA point of view, AI-generated email was found to be either more effective or performed similarly to human-written email on almost all AIDA stages.

However, for both CTR and conversion rates, the number of people who clicked and converted is too small. That makes it difficult to draw any significant conclusion. And even though the available data suggests that the human-written email had a higher CTR in email group 1 and the AI-generated email had higher conversion rates for both email groups, the limited number of clicks and conversions calls for further research and larger samples to draw more significant conclusions.

3.6. Results for the perception of professional writers

Based on the survey of professional writers conducted to understand the perception of professional writers for the effectiveness, credibility, content quality, and limitations of AI-generated content and tools, the author coded the data and analyzed the results using SPSS. Testing methods used for analysis included descriptive analysis, Spearman's correlation, and the Kruskal-Wallis H test.

The results from descriptive statistics for the frequency of AI tools usage are presented in Table 9, showing the frequency of using AI tools among professional writers.

Based on these results, 18.2% of writers use AI tools daily while 34.5% use them every week. Additionally, 34.5% of the writers hardly every use AI tools for content generation as they only use it on a monthly or rare need basis. The number of respondents who have never used AI tools is only 12.7%.

Table 9. Usage frequency of AI tools among professional writers

Frequency of use	N (%)
Daily	10 (18.2%)
Weekly	19 (34.5%)
Monthly	8 (14.5%)
Rarely	11 (20%)
Never used AI tools	7 (12.7%)

Source: Author’s Calculations

On the other hand, as illustrated in Figure 9, a significant majority of content writers (83.60%) said they have used ChatGPT. This indicates ChatGPT to be the most popular AI tool among professional writers who are using AI tools. Other AI tools such as Copy.ai (23.60%), Word Hero (18.20%), and Jasper.ai (14.50%) are also being used by writers but their percentage is considerable lower.

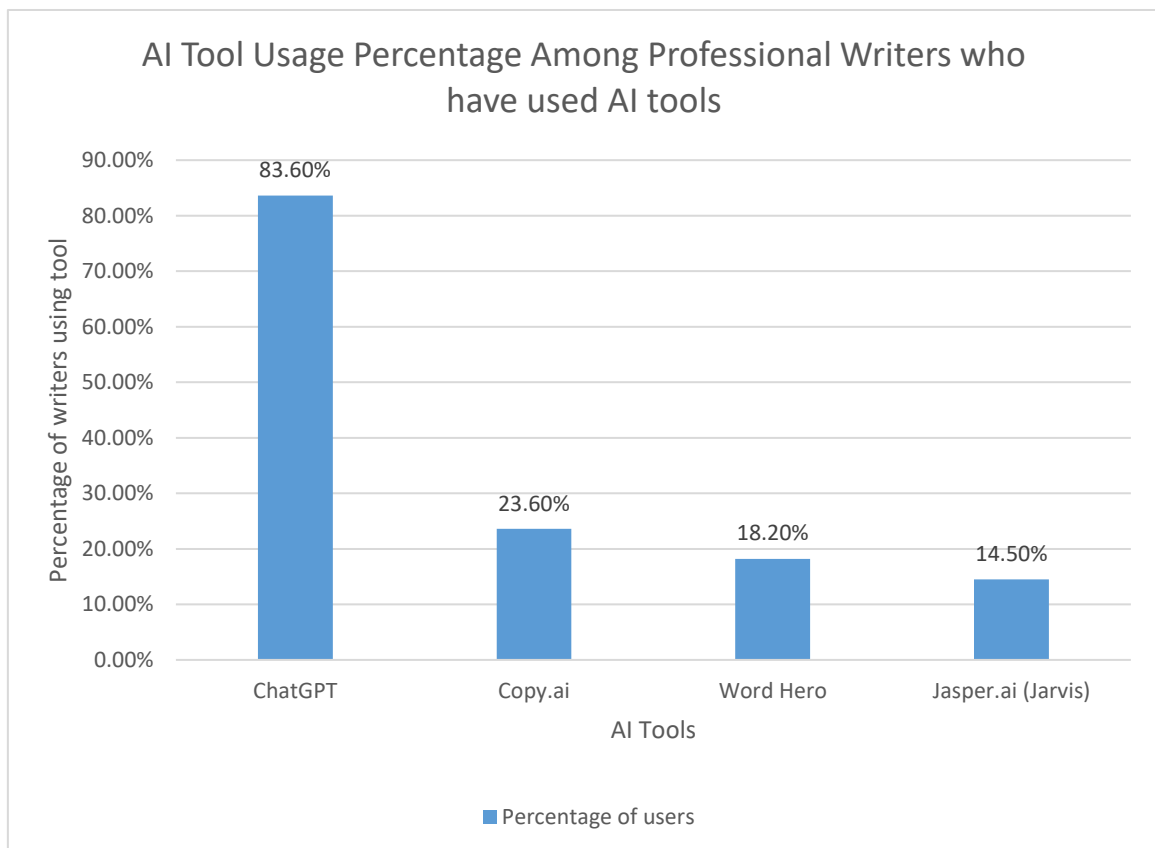


Figure 9. AI tools usage percentage among professional writers who have used AI tools
 Source: Author’s calculations

The descriptive statistics results for effectiveness, credibility, and content quality variables (Table 10) show that, on average, respondents hold a fairly positive opinion about the effectiveness of AI-generated content (mean = 3.7844). However, they gave slightly lower ratings for credibility (mean = 3.6344) and content quality (mean = 3.5813). As a whole, the results from the first three variables are positive. Interestingly, writers also rated the limitation of AI-generated content positively (mean = 3.4656). This indicates that while they find the AI content to be effective, they also acknowledge that AI-generated content might have some limitations such as misleading content or potential struggle with conveying complex topics.

Table 10. Descriptive statistics for effectiveness, credibility, content quality, and limitations.

Descriptive statistics					
	N	minimum	maximum	mean	std. deviation
Effectiveness	55	1.00	5.00	3.7844	1.01939
Credibility	55	1.00	5.00	3.6344	1.00862
Content quality	55	1.00	5.00	3.5813	0.90163
Limitations	55	1.00	5.00	3.4656	0.91726

Source: Author’s calculations from results of Appendix 6

To dig deeper, Spearman’s correlation and Kruskal-Wallis H test were also conducted by the author. The correlation analysis involved the new variables of effectiveness, content quality, credibility, limitations (averages of Likert scale responses), frequency of usage, and years of experience.

The results from Spearman’s correlation analysis (appendix. 6) showed no significant correlation between experience and variables related to AI-generated content. However, between frequency of usage and AI content variables of effectiveness (correlation coefficient = 0.327, $p = 0.003$), credibility (correlation coefficient = 0.299, $p = 0.007$), and content quality (correlation coefficient = 0.305, $p = 0.006$), it shows a moderate positive correlation which is statistically significant ($p < 0.05$).

In addition to that, it also shows that effectiveness has a strong positive correlation with both credibility (correlation coefficient = .651, $p < .001$) and content quality (correlation coefficient = .671, $p < .001$). This means that writers who perceive AI content as effective positively also tend to perceive content quality and credibility as positive. In other words, it means if the perception of the effectiveness of AI-generated content increases, it also tends to increase the credibility and content quality of the AI-generated content for writers. In addition to that, credibility is also positively correlated with content quality (correlation coefficient = 0.734, $p < .001$), indicating a strong positive correlation.

As for the Kruskal-Wallis H test, it involved the new variables of effectiveness, content quality, credibility, and limitations (averages of Likert scale responses) with gender and education as grouping variables (appendix 6). The results from the gender test indicate that there is no significance difference in perception of effectiveness, content quality, and limitations. However, for credibility (Kruskal-Wallis H = 4.822, sig = 0.028), there is a significant difference in the perception of both genders. The results from the education group indicate no significant difference between the perception of writers for effectiveness, content quality, credibility, and limitations based on their education.

From the perspective of the TAM framework, the results from descriptive statistics (Table 10.) suggest that professional writers perceive AI-generated content to be fairly useful but with some limitations. And since a majority of writers are using AI tools to some extent, it indicated their adoption behavior as per the TAM framework.

4. DISCUSSION

The findings from this study provide valuable insights into the performance of AI-generated in comparison to human-written content. By analyzing the data from professional writers' questionnaires, blog posts experiment, email experiments, and landing pages, we can draw several conclusions.

The AI-generated blog post demonstrated higher engagement time, engagement rate, and events per session compared to the human-written blog post. However, there was no significant difference in readers' perception of effectiveness, content quality, and credibility between the two types of content. This suggests that AI-generated content can be as effective as human-written content in terms of engaging readers and providing useful information. Additionally, the Chi-square test also showed that readers were not able to accurately differentiate between AI-generated and human-written content, which implies that AI-generated content can effectively mimic human writing.

For the landing page comparison, human-written content performed better than AI-generated content in terms of engagement rate, conversion rate, and user interaction. However, there was no significant difference in the average engagement time per session between the two content types. These results show that human-written content is more effective than AI-generated content for landing pages, particularly in capturing user attention and driving users to action.

In both email experiment groups, AI-generated content had higher open rates than human-written content, suggesting a better ability to capture recipients' attention. However, the CTR and conversion rates despite AI showing a higher tendency to drive users to take desired action in both emails, were inconclusive due to the small number of clicks and conversions. This requires further research with larger samples to draw more significant conclusions.

Lastly, the professional writers' questionnaire results suggest that writers perceive AI-generated content to be useful and rated it positively in terms of effectiveness, credibility, and content quality. Additionally, they also acknowledge the limitations such as lack of creativity & originality, and a

higher chance of misleading information. Furthermore, the results from the Kruskal-Wallis H test indicate a significant difference between gender and credibility. Spearman's correlation test revealed a significant correlation between the frequency of AI tools usage and content quality, effectiveness, & credibility variables indicating that the more writers use AI to generate content, the more they find it useful.

This study adds to the growing body of knowledge on AI-generated content performance in comparison to human-written content and provides evidence on the performance of AI-generated content across emails, blog posts, and landing pages. This information can be used as a foundation for future research in this field. Furthermore, the study broadens the application of the SMCR, AIDA, and TAM models in the context of AI-generated content.

The findings provide valuable insights into the performance of AI-generated content and the perceptions of writers and readers about its usefulness. This can be further investigated in future research to better understand the factors related to AI-generated content. Additionally, future researchers can compare the performance of AI content with human-written content, and a third comparison group of AI-human-written content to explore the performance and effectiveness of each.

From a managerial standpoint, this study offers various practical implications. First, content managers and marketers should consider integrating AI-generated content into their strategies, as it has been demonstrated to be competitive with human-written content for some content types. This can help companies produce content more efficiently and cost-effectively as AI generates content faster and at lower costs than humans. Additionally, since users are unable to accurately differentiate between AI and human-written content, managers can use AI-generated content without negatively impacting their brand image or the credibility of the content. Lastly, given the limitations of AI content, managers can offer suitable training and support for writers who might be collaborating with AI tools to create content, aiding them in better understanding and utilizing the technology.

Aside from these academic and managerial implications, the study also has some limitations. Firstly, the sample size for some experiments, particularly email experiments, was small, with only four emails sent in total. This resulted in smaller conversion rate numbers and limited the ability

to draw significant conclusions. Future research should consider using larger sample sizes to strengthen the findings.

Secondly, the study focused on a limited number of content types, such as email, blog, and landing page, which might not cover the entire range of content produced by AI and humans. Future research can explore other content types and formats to provide a more comprehensive understanding of AI-generated content performance. Lastly, for Facebook Ads and landing pages, UTM parameters were used to track users, which can lead to discrepancies between platforms and might not accurately track data across different devices.

Other than that, the study also encountered some technical limitations such as the results from landing pages and blog posts obtained from Google Analytics were not individual results but overall results which limited the scope of analysis.

CONCLUSION

The primary objective of this study is to understand the performance of AI-generated content in comparison to human-written content along with assessing the perception of professional writers and readers. The analysis conducted for the study provides valuable insights into the performance of AI-generated and human-written content across 3 different content types from the lens of SMCR and AIDA, along with the perception of professional writers and readers related to effectiveness, content quality, and credibility of the AI content from the perspective of TAM.

While there were no significant differences in perceived effectiveness, content quality, and credibility for blog posts among readers, AI-generated blog performed better than human-written blog in terms of engagement rate, events per session, and average engagement time per session.

For landing pages, human-written content outperformed AI-generated content and had a 97.37% higher engagement rate, making it more successful in capturing the audience's attention and desire.

On the other hand, the results for email experiments showed AI content to be more effective in capturing attention and bringing users to the desired action but were inconclusive due to small numbers and warrant further investigation with larger sample sizes. The survey of professional writers about the perception of effectiveness, content quality, credibility, and limitations found that writers consider AI-generated content to be effective, high quality, and fairly credible while acknowledging its limitations.

Practically, this information can help marketers and business managers to make informed decisions about the incorporation of AI-generated content in overall content strategy and its possible impact. Future research can further explore the potential of AI-generated content in various content types and contexts, as well as potential moderating factors that may influence its performance.

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APPENDICES

Appendix 1. AI-generated blog prompt for GPT4

Prompt: Write a 1000+ words blog that educates readers on the topic "Unraveling the Mysteries of Hair Thinning: Causes, Prevention, and the Game-Changing Role of Onion Oil" and provides practical tips. Use a conversational and engaging tone that reassures readers and draws on research and references to support your claims. Break up the content with short paragraphs, bullet points, and subheadings to make it easy to read and identify key takeaways. End the blog with a call to action that inspires readers to take action and learn more about Onion Oil.

Appendix 2. Prompts and content results for emails

Email 1 Prompt:


So I am running this offer of Free Delivery! for customers who haven't made a purchase yet on Bano Herbal's Store. The free delivery offer is not limited to just one product or category, but all skin and hair care products available on Bano Herbal. Therefore, I need you to write an engaging email that converts them. Determine the most appropriate, creative, engaging language, CTA, Title, content, preview text etc. Make sure it is brief yet effective rather than writing too much text and keep the body of the email brief. Also, don't include unnecessary details as I will be adding a direct link to website.

Prompt Result:

To	Customers who haven't purchased
From	bano.skincare@gmail.com
Subject	Limited Time Offer: Enjoy FREE Delivery on All Bano Herbal Products!
Preview text	Unlock FREE Delivery on Bano Herbal's All-Natural Hair & Skin Care Products – Limited Time Only!

DesktopMobile

Bano Herbal



Don't wait – this exclusive offer won't last long!

We have an exciting offer just for you: For a limited time, enjoy FREE delivery on all Bano Herbal skin and hair care products! Our all-natural, chemical-free, and cruelty-free products are the perfect addition to your self-care routine.

To claim your FREE delivery, simply use promo code **RAMADANKAREEM** at checkout.

Happy shopping!

Warm regards,

The Bano Herbal Team

Click Here to Shop Now and Get Free Delivery!

Source: Author's snapshot from Bano Herbal's Shopify

Appendix 2 continued

Human Email Group 1:

Customers who haven't purchased

From

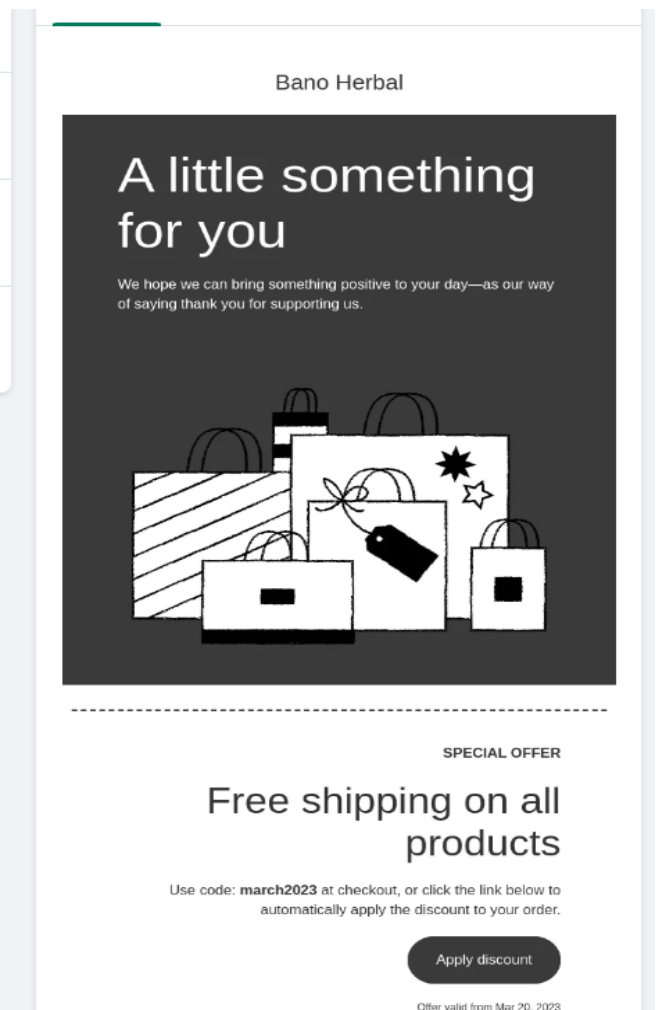
bano.skincare@gmail.com

Subject

Free Delivery Only for You

Preview text

We thought to cheer you up with something FREE



Source: Author's snapshot from Bano Herbal's Shopify

Prompt Email Group 2:

I have this deal:

Acne Free Trio, Sale price Rs.2,000.00, Regular price Rs.2,050.00, SALE, Tax included. Shipping calculated at checkout.

One Complete Solution for Acne-Prone Skin.

For the last four years, Bano Herbal is spreading smiles in youth, suffering from ACNE. Our Acne Cure Paste, Neem Facewash, and Neem Active Spray is one complete solution for all types of Acne. This amazing trio has thousands of satisfied customers all over Pakistan. #0Chemical

Best for 1. Acne 2.Pimples 3. Acne Marks 4. Deep cleansing 5. Blemishes 6. Pigmentation 7. Suntan 8. Open Pores 9. Excessive Oil

Key Ingredients:

Mint, Basil, Neem Leaves, Moringa, Vitamin E Oil, Rosemary Oil, Zinc Oxide, Rose, Turmeric Powder, Nutmeg, Starch, Sana Maki, Fuller's Earth, Cinnamon, Fenugreek, Colin Clay, Paraben-Free. Chemical Free. Cruelty-Free.

Appendix 2 continued

For further queries:

Insta: @bano.skincare

WhatsApp: 03079403557

#herballifestyle #0chemical #pakistan

Customers also get free delivery automatically since the order price is 2000.

Following the best email suggestion and elements, i need you to write an email for customers of my shopify store, Bano Herbal.

Results:

Subject: 🌟 Exclusive Offer: Save on Our Acne Free Trio + FREE Shipping! 🌟

Preheader: Limited Time Sale - Transform Your Acne-Prone Skin with Bano Herbal's Acne Free Trio

Dear [Customer's Name],

We're excited to announce an exclusive offer just for you! For a limited time, save on our bestselling Acne Free Trio and get on the path to clearer, healthier skin. Plus, enjoy FREE shipping with your purchase! Don't miss out on this amazing opportunity.

🌿 Acne Free Trio: Special Sale Price Rs.2,000.00 (Regular price Rs.2,050.00)

What's included:

Acne Cure Paste

Neem Facewash

Neem Active Spray

Why choose our Acne Free Trio? ✔️ Trusted by thousands of satisfied customers across Pakistan

✔️ 100% natural, chemical-free, and cruelty-free ✔️ Effective against acne, pimples, blemishes, pigmentation, and more ✔️ Formulated with powerful herbal ingredients like mint, neem, moringa, and turmeric

✔️ FREE shipping on your order

Don't wait! This offer is available for a limited time only.

🔥 [Claim Your Discount & Get FREE Shipping Now!] 🔥

For any questions or assistance, feel free to reach out to us on Instagram @bano.skincare or WhatsApp at 03079403557.

Thank you for being a valued Bano Herbal customer. We can't wait to help you achieve beautiful, acne-free skin.

Happy shopping!

Best regards,

[Your Name] [Your Title/Position] Bano Herbal [Company Contact Information]

[Optional: Social Media Links or Newsletter Subscription Information]


Preview Text: Save BIG on Acne Free Trio + FREE Shipping! Limited time offer to achieve clearer, healthier skin with our natural, chemical-free solution.

Appendix 2 continued

Human Email Group 2:

Bano Herbal

Eid is just around the corner, so here is little something from us to celebrate it and have a healthy and bright skin.




Acne Free Trio
~~Rs3,000.00~~ **Rs2,000.00**


One Complete Solution for Acne-Prone Skin.

[Checkout Now](#)

For the last five years, **Bano Herbal** is spreading smiles in youth, suffering from ACNE. Our Acne Curo Paste, Neem Facewash, and Neem Active Spray is one complete solution for all types of Acne. This amazing trio has thousands of satisfied customers all over Pakistan.

#herbalifestyle #Ochemical #pakistan





Best for:

- Acne, Pimples, Acne Marks,
- Deep cleansing, Blemishes,
- Pigmentation, Suntan
- Open Pores and Excessive Oil

[Learn more](#)

Key Ingredients:

- Mint, Basil, Neem Leaves,
- Moringa, Vitamin E Oil,
- Rosemary Oil, Zinc Oxide,
- Rose, Turmeric Powder,
- Nutmeg, Starch, Sandalwood,
- Fuller's Earth, Cinnamon,
- Fenugreek, Colli Clay

[Learn more](#)

Paraben-Free. Chemical Free. Cruelty-Free.

Source: Author's snapshot from Bano Herbal's shopify

Appendix 3. Prompt and content results for AI landing page and its Ad copy

Landing Page Prompt:

I want you to act as a product landing page content planner and writer, crafting well-structured, persuasive, and engaging content that effectively showcases a product's features, benefits, and unique selling points. Your responses should focus on addressing the needs and desires of the target audience, encouraging them to take action, such as making a purchase. Additionally, consider using clear and concise language, persuasive calls-to-action, and visually appealing elements like images, videos, or graphics to create an impactful and high-converting landing page. Your first task is to plan and write the content for a product landing page for "Onion Oil," a new Paraben-Free, Chemical-Free, and Cruelty-Free oil for hair loss etc. Highlight the key features, benefits, and reasons why customers should choose Onion Oil over other Hair loss products on the market. Additionally, remember to use Pakistani names in the testimonials and provide answers to FAQ section instead of simply providing questions. Also, don't provide 30 days guarantee or discount as it is not for a promotion.

Ad copy prompt:

Considering the landing page content that you provided above, what should be the content for Facebook ads and what kind of image or video should be used along with call to action. You can also provide me details for the suitable target audience and regions in Pakistan where this ad should be running for better results.

Ad copy result:

Response:

[Headline] Unlock the Secret to Healthy, Radiant Hair with Onion Oil! ✨

[Body] Are you struggling with hair loss, breakage, and thinning? It's time to explore the power of our all-natural Onion & Coconut Oil blend. Transform your hair and regain your confidence! Visit our website to learn more about this incredible solution. 🌿👩💡

[Call-to-Action] Learn More

Image/Video Suggestions:

An engaging image or video showcasing the benefits of using Onion Oil, such as promoting hair growth, reducing breakage, and restoring shine.

A captivating image of the Onion Oil bottle, highlighting its natural ingredients (onions and coconut oil).

A short video featuring expert advice or testimonials from satisfied customers, sharing their experiences with Onion Oil.

Remember to optimize the ad copy, images, and targeting to encourage more clicks and visits to the website. The "Learn More" CTA is an excellent choice for driving traffic to your site, allowing potential customers to explore Onion Oil's benefits and features in greater detail before making a purchase decision.

Appendix 4. Questionnaire for Blog Posts

Thank you for participating in this survey. You will be asked to read a blog post and provide your feedback on its quality and effectiveness. Here is a link to the blog post (inserted link for the version of blog post that was being served to them).

Your responses will help us better understand the perception and evaluation of content quality and credibility. Your participation is voluntary, and your answers will be kept confidential.

Please read the blog post carefully and then answer the questions that follow.

Demographics (optional)

Please specify your age.
(OPEN TEXT)

What is your gender?

- a) Man
- b) woman
- c) Non-binary
- d) Prefer not to say

Effectiveness

Please rate the following statements regarding the effectiveness of the blog post on a scale of 1 to 5 (1 being strongly disagree, 5 being strongly agree).

The blog post ...

1. effectively conveyed its intended message.
2. provided valuable and informative content.
3. engaged and captured my attention.
4. was persuasive in promoting the solution to the problem.

Content Quality

Please rate the following statements regarding the quality of the blog post on a scale of 1 to 5 (1 being strongly disagree, 5 being strongly agree).

The blog post...

1. was well-written and free of errors.
2. maintained a consistent tone and style.
3. had a clear structure and flow.
4. was easy to read and understand.

Credibility

Please rate the following statements regarding the credibility of the blog post on a scale of 1 to 5 (1 being strongly disagree, 5 being strongly agree).

Appendix 4 continued

The blog post...

1. provided reliable information.
2. was written in a professional and credible manner.
3. demonstrated expertise on the subject matter.
4. built trust with the reader.

Section 4: Perception of the Author

The text you read was randomly selected from the pool of articles written by both human professionals and AI. Assess the following statement on a scale of 1 to 5, with 1 being "Strongly Disagree" and 5 being "Strongly Agree".

The text was written by a human.

Closing:

Thank you for participating in this survey. Your feedback is greatly appreciated and will help us better understand the subject matter. If you have any additional comments or suggestions, please feel free to share them below or by sending an email at: soarsh@ttu.ee.

Appendix 5. Questionnaire for professional writers

Thank you for participating in this survey!

The purpose of the survey is to gather the opinions and experiences of professional writers regarding the use of AI-powered writing tools in the industry. The survey aims to understand the perception and attitudes of writers towards AI-generated content.

Your responses will be anonymous and will be used for research purposes only.

Demographic Questions:

1. Age: Please specify your age (eg., 25)?

(Open Text)

2. What is your gender?

- a) Man
- b) Woman
- c) Non-binary
- d) Prefer not to say

3. Country: Please specify your country of residence (eg. Estonia)

(Open Text)

4. What is your highest level of education?

- a) High school diploma or equivalent
- b) Associate degree
- c) Bachelor's degree
- d) Master's degree
- e) Doctoral degree

Professional experience:

5. How many years of experience do you have in professional writing?

(Open Text)

6. Which industry do you primarily write for? (Select all that apply)

- a) Technology
- b) Healthcare
- c) Finance
- d) Retail
- e) Education
- f) Travel & Hospitality
- g) Entertainment
- h) Other (please specify)

Experience with AI Generated Content:

Appendix 5 continued

7. Which AI content generation tools have you used? (Select all that apply)

- a) OpenAI's Chat GPT
- b) AI Writer
- c) Copy.ai
- d) Jarvis (Conversion.ai)
- e) Other (please specify)

8. How frequently do you use AI-powered writing tools?

- a) Daily
- b) Weekly
- c) Monthly
- d) Rarely
- e) Never used AI-powered writing tools

Perception of AI Generated Content:

Effectiveness:

Please rate the following statements regarding the effectiveness of AI-generated content on a scale of 1 to 5 (1 being strongly disagree, 5 being strongly agree).

AI-generated content...

- 1. is effective in conveying the intended message.
- 2. is informative and provides value to the reader.
- 3. can significantly save time in the content creation process.
- 4. can improve personalization and targeting in content marketing.

Credibility:

Please rate the following statements regarding the credibility of AI-generated content on a scale of 1 to 5 (1 being strongly disagree, 5 being strongly agree).

AI-generated content

- 1. is well-researched and provides reliable information.
- 2. is written in a professional and credible manner.
- 3. is generally perceived as credible by readers.
- 4. is effective in building trust with the target audience.

Content Quality:

Please rate the following statements regarding the quality of AI-generated content on a scale of 1 to 5 (1 being strongly disagree, 5 being strongly agree).

AI-generated content...

- 1. is of high quality and meets professional standards.
- 2. can match the quality of human-written content.
- 3. maintains consistent tone and style.
- 4. requires minimal editing and proofreading.

Appendix 5 continued

Limitations:

Please rate the following statements regarding the limitations of AI-generated content on a scale of 1 to 5 (1 being strongly disagree, 5 being strongly agree).

AI-generated content...

1. has a higher risk of misleading or incorrect information.
2. has limitations in creativity and originality.
3. may struggle to convey complex or nuanced topics.
4. poses ethical concerns in content marketing.

Appendix 6. Descriptive Statistics for writer's questionnaire

		Statistics			
		Effectiveness	Credibility	Content_quality	Limitations
N	Valid	80	80	80	80
	Missing	0	0	0	0
Mean		3.7844	3.6344	3.5813	3.4656
Median		4.0000	3.5000	3.7500	3.5000
Std. Deviation		1.01939	1.00862	.90163	.91726
Minimum		1.00	1.00	1.00	1.00
Maximum		5.00	5.00	5.00	5.00

Source: SPSS descriptive statistics results based on author's calculations

Appendix 7. Correlation analysis for writer's questionnaire

		Correlations						
		Effectiveness	Credibility	Content_quality	Limitations	Experience_m edian	frequency_of_u sage	
Spearman's rho	Effectiveness	Correlation Coefficient	1.000	.651**	.671**	-.118	.111	.327**
		Sig. (2-tailed)	.	<.001	<.001	.299	.326	.003
		N	80	80	80	80	80	80
	Credibility	Correlation Coefficient	.651**	1.000	.734**	-.076	.152	.299**
		Sig. (2-tailed)	<.001	.	<.001	.500	.178	.007
		N	80	80	80	80	80	80
	Content_quality	Correlation Coefficient	.671**	.734**	1.000	-.126	.086	.305**
		Sig. (2-tailed)	<.001	<.001	.	.267	.450	.006
		N	80	80	80	80	80	80
	Limitations	Correlation Coefficient	-.118	-.076	-.126	1.000	.024	-.182
		Sig. (2-tailed)	.299	.500	.267	.	.836	.107
		N	80	80	80	80	80	80
	Experience_median	Correlation Coefficient	.111	.152	.086	.024	1.000	.208
		Sig. (2-tailed)	.326	.178	.450	.836	.	.064
		N	80	80	80	80	80	80
	frequency_of_usage	Correlation Coefficient	.327**	.299**	.305**	-.182	.208	1.000
		Sig. (2-tailed)	.003	.007	.006	.107	.064	.
		N	80	80	80	80	80	80

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Author's analysis

Appendix 8. Kruskal-Wallis H for writer's questionnaire 1

Test Statistics^{a,b}

	Effectiveness	Credibility	Content_quality	Limitations
Kruskal-Wallis H	2.735	4.822	.647	.031
df	1	1	1	1
Asymp. Sig.	.098	.028	.421	.861

a. Kruskal Wallis Test

b. Grouping Variable: Gender

Source: SPSS results for Kruskal-Wallis H test with gender as grouping variable

Appendix 9. Kruskal-Wallis H for writer's questionnaire 2

Test Statistics^{a,b}

	Effectiveness	Credibility	Content_quality	Limitations
Kruskal-Wallis H	3.148	4.848	1.776	2.350
df	2	2	2	2
Asymp. Sig.	.207	.089	.412	.309

a. Kruskal Wallis Test

b. Grouping Variable: Education_A

SPSS results for Kruskal-Wallis H test with gender as grouping variable

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