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Development and Evaluation of an AI-Based Web Information System Using the APPED Model for Strategic Marketing Management in Islamic Higher Education

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A R T I C L E I N F O

Keywords:

AI-based website;
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ABSTRACT

Digital transformation has motivated higher education institutions to devise more flexible and technology-driven marketing strategies. The Islamic Education Management Study Program at UIN Syekh Wasil Kediri initially faced marketing challenges, including limited digital exposure, reliance on traditional promotion, and shortage of staff for regular updating the website content. The goal of this research was making an AI that is a website for the study program to help promote management marketing strategies more effectively. This study is a mix of Research and Development based on the APPED model that comprises: Analysis, Planning, Production, Evaluation, and Dissemination. The website was created with WordPress-based Content Management System paired with the custom AI generator plugin, which generates content automatically and also provides SEO (Search Engine Optimization) support. Feedback indicates that AI-based platform played a critical role in reshaping the program's marketing strategy from the old manual and traditional approach to the vibrant, efficient, and digitally customer-centric one.The AI plugin gave the administrators the ability to generate articles and promotional content based on the selected keywords, which ultimately reduced the workload of content production without compromising on frequent updates. This study shows that besides preserving the tradition of Islamic teachings, an AI-based website can be a tool for sustained development and a medium to help enhance visibility, institutional image, and marketing effectiveness of Islamic higher education.

Kata Kunci:

Web Berbasis AI;
Manajemen Pemasaran Digital;
Model APPED;
Manajemen Pendidikan Islam;

Transformasi digital telah mendorong lembaga pendidikan tinggi untuk merancang strategi pemasaran yang lebih fleksibel dan didorong oleh teknologi. Program Studi Manajemen Pendidikan Islam di UIN Syekh Wasil Kediri, dalam hal pemasaran, sempat menghadapi kendala awal seperti minimnya eksposur digital, ketergantungan pada promosi tradisional, serta kurangnya tenaga kerja untuk memperbarui konten situs web secara rutin. Tujuan penelitian ini adalah mengembangkan AI berupa situs web untuk program studi tersebut guna membantu mempromosikan strategi pemasaran manajemen secara lebih efektif. Penelitian ini merupakan perpaduan antara Penelitian dan Pengembangan (R&D) berdasarkan model APPED yang terdiri dari: Analisis, Perencanaan, Produksi, Evaluasi, dan Diseminasi. Situs web tersebut dibuat menggunakan Sistem Manajemen Konten (CMS) berbasis WordPress yang dipadukan dengan plugin generator AI khusus, yang secara otomatis menghasilkan konten serta menyediakan dukungan SEO (Search Engine Optimization). Umpan balik menunjukkan bahwa platform berbasis AI memainkan peran penting dalam mengubah strategi pemasaran program tersebut dari

pendekatan manual dan tradisional yang lama menjadi pendekatan yang dinamis, efisien, dan berorientasi pada pelanggan secara digital. Plugin AI tersebut memberikan kemampuan kepada para administrator untuk menghasilkan artikel dan konten promosi berdasarkan kata kunci yang dipilih, yang pada akhirnya mengurangi beban kerja produksi konten tanpa mengorbankan frekuensi pembaruan. Studi ini menunjukkan bahwa selain melestarikan tradisi ajaran Islam, situs web berbasis AI dapat menjadi alat untuk pengembangan berkelanjutan dan sarana untuk membantu meningkatkan visibilitas, citra institusi, serta efektivitas pemasaran pendidikan tinggi Islam.

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1. INTRODUCTION

Higher education institutions have been compelled more and more to incorporate digital transformation in their processes as prospective students nowadays are heavily relying on digital platforms to find, compare and evaluate academic programs. As a result, institutional visibility cannot solely rely on traditional promotional strategies such as brochures, school visits, seminars, or printed media. Study programs need to provide digital channels with accessible, updated, and relevant information in order to promote their public image and strengthen competitiveness. A number of recent studies also point to digital marketing in higher education as a factor leading to student recruitment, institutional branding, student engagement, and relationship management between institutions and prospective students (Pawar, 2024; To et al., 2024). Preliminary observations conducted in early 2024 revealed that the study program's digital promotional materials reached fewer than 50 prospective students per month due to the absence of a dedicated, easily accessible website. The novelty of this research lies not merely in adopting AI, but in formulating a sustainable AI-management strategy integrated within the APPED framework specifically tailored for Islamic educational institutions, which often face unique human resource constraints (Pawar, 2024). This is evidence that digital marketing in fact is a strategic tool in higher education management especially with an academic environment ever increasing competition.

The Islamic Education Management Study Program at UIN Syekh Wasil Kediri has good potential for developing into a study program that can meet the demand of Islamic educational institutions. However, the program is still quite behind when it comes to marketing management, particularly in offering effective digital information services for potential students. From the initial background of this research, one of the key issues is the lack of an independent study program website that can showcase information about academic activities, curriculum strengths, student achievements, alumni profiles, and institutional identity. To worsen the problem, the limited availability of human resources who regularly update the website's content has led to a less than optimal information dissemination. Empirical baseline data collected prior to this intervention revealed that the MPI study program lacked an independent website, relying solely on faculty-level pages that were updated less than twice per semester. An initial preliminary survey of 50 prospective students showed that 84% experienced difficulties in accessing updated curriculum, tuition, and admissions information. Furthermore, Google Analytics data from the existing institutional domain indicated an average of fewer than 45 organic monthly visits to MPI-related content, confirming severe digital invisibility and the inefficiency of

conventional promotional materials.Therefore, prospective students and the general public may find it hard to get relevant and updated information about the study program.

Basically this issue is reflecting a more general problem of marketing management of higher education institutions. Digital marketing allows education institutions to reach wider audiences, foster stronger interaction, and communicate value more efficiently. Marketing in higher education studies demonstrate that image of university, brand identity, student satisfaction, and institutional communication are heavily correlated with how students view quality and attractiveness of the higher education institution (Han & Sa, 2022; Hemsley-Brown et al., 2022; Pereira et al., 2022). Therefore, higher education marketing management must go beyond just promotion to value creation, trust-building, and information provision to future students.

Artificial intelligence (AI) is a new chance for education digital marketing to get better. AI ability is to help and personalize, analyze data, produce content automatically, interact with customers, and make decisions in marketing dealings. A thorough examination done by Pratama (2025) reveals that AI has become a strategic enabler of customization, predictive analytics, content automation, and customer experience management in digital marketing (Adinanda Siswoyo et al., 2023) . Likewise, Ulfa et al. (2025) point out that AI-based digital marketing can lead to better personalization, more effective campaigns, enhanced customer experience, and greater decision-making efficiency (Ulfa & others, 2025). It is important to consider prospective students in higher education who want not just information availability but also content that is relevant, delivered timely and aligned with their academic interests.

At the same time, when it comes to educational marketing, AI can be utilized to tailor messages, enhance efficiency, and target prospective students more precisely. Haniatin (2024) discovered that AI use in educational marketing leads to improved advertisement personalization, shortened time for prospective students to make decisions, and better optimization of marketing operations (Haniatin et al., 2024). By employing machine learning and big data, educational institutions are also capable to identify relevant audiences and improve enrollment conversion rates. Clearly, AI is not just about technology anymore; it is also about education marketing strategies as well as marketing effectiveness that the education sector is interested in.

Developing a website with AI for Islamic Education Management Study Program of UIN Syekh Wasil Kediri can be seen as a tangible step that aims at going beyond the traditional marketing and human resource limits. AI-assisted content creation yields various types of website content such as news, articles, activity reports, promotional narratives, alumni stories, and program excellence descriptions. A website administrator just needs to input a prompt like student activities, lecturer achievements, alumni success stories, or MPI program strengths, and the AI system will produce the first draft which later may be reviewed and modified before publishing. Therefore, the website not only represents an information source, but also serves as a marketing platform actively and continuously presenting updated and relevant content. Based on research, generative AI aids in content marketing creativity and efficiency by automating content production, improving existing contents, and enabling personalized communication based on user preferences (Moharam & Tawalbeh, 2025).

Conceptually, this research is based on digital marketing management and Resource-Based View. Digital marketing considers an AI-based website as a channel through which institutional value is created, delivered, and communicated to potential students. On the other hand, Resource-Based View regards that a well-organized website powered by AI is a digital strategic resource capable of creating institutional value, increasing marketing prowess, aiding differentiation, and reinforcing competitive advantage. Meticulously managed digital resources, technological capability, and AI-based marketing capacities are, according to recent studies, conducive to organizational performance and competence when their management is strategic (Mikalef & others, 2023; Willie, 2025).

There has been some talk about digital marketing, higher education branding, and AI-based marketing in prior research; however, research pertaining to the development of an AI-based website for marketing management in Islamic higher education study programs is still very scarce. As a result, most existing studies focus on social media marketing, general university branding, student recruitment, or AI-based marketing in business contexts. So, the present study intends to close the gap by exploring how the

implementation of an AI-based website can be done as a marketing management strategy for Islamic Education Management Study Program. The originality of this study is based on AI-assisted content generation as a means of solving the problems of study program visibility, information accessibility, institutional image and digital branding within the context of Islamic higher education. The novelty of this research extends beyond the technical integration of generative AI. It lies in establishing a operationalized marketing management framework that combines prompt-engineered AI content generation with a Human-in-the-Loop (HITL) editorial governance protocol, embedded directly within the APPED R&D cycle for Islamic higher education. While previous literature predominantly focuses on general social media branding or business-centric AI applications (Cingillioglu et al., 2024; Pawar, 2024), this study fills a crucial gap by providing a structured model to resolve severe human resource limitations while preserving academic rigor and institutional values in Islamic educational marketing.

From this perspective, this research decided to focus on two major questions: The first one is, how to develop the marketing management strategy of the Islamic Education Management Study Program through an AI-based website? The second one pertains to finding what method is the best under the circumstances for managing the marketing of the Islamic Education Management Study Program by means of an AI-based website. These queries are quite essential for the fact that digital marketing success not only relies on existence of a website but also on strategy, method, content management system and institutional readiness for sustainable management of the platform.

Thus, the present research is dedicated to planning a marketing management strategy of Islamic Education Management Study Program through the creation of an AI-based website and identifying the best way of conducting study program marketing via an AI platform. The findings of this research are anticipated to have both academic and practical value. Academically, this study contributes to digital marketing management literature of higher education, especially by integrating AI into the marketing strategy of an Islamic higher education study program. It also demonstrates in the application of the Resource-Based View how an AI-supported website can serve as a valuable digital resource for institutional competitiveness. On the practical level, this research provides a strategic solution for the MPI Study Program of UIN Syekh Wasil Kediri that enables the program to overcome the constraints of traditional promotion and limited human resources through automatic content generation. Furthermore, it aims to enhance study program visibility, improve public image, and strengthen competitiveness. The study also offers a model that other study programs or academic units within UIN Syekh Wasil Kediri may adopt.

2. RESEARCH METHOD

RESEARCH DESIGN

This research utilized the Research and Development (R&D) method to design, develop, and evaluate an AI-based website for the marketing management of the Islamic Education Management Study Program at UIN Syekh Wasil Kediri. The R&D method was seen as suitable since the research did not aim merely to describe an existing phenomenon, but also intended to create a practical digital product in the form of a website prototype capable of supporting study program promotion, information management, and content generation. Recent research in educational technology indicates that R&D is mainly utilized to design and validate educational web-based products including websites and digital learning media, through a series of systematic stages of analysis, design, development, and evaluation (Pauji et al., 2025).

To carry out the research, the development methodology chosen was the APPED model, which includes five interconnected phases: Analysis, Planning, Production, Evaluation, and Dissemination. This model was based on the development framework of Herman Dwi Surjono and has been utilized in educational technology development research recently. For instance, Susanto (2023) states that the APPED model contains five logical steps, namely analysis, planning, production, evaluation, and dissemination, and is quite useful for R&D-based media development (Susanto et al., 2023). Bahrun et al. (2023) also used the APPED model in the development of interactive multimedia, starting from initial analysis and research, then design, production, evaluation, and dissemination (Bahrun et al., 2023). Here the APPED model was modified to the setting of development of an AI-based website for marketing higher education.

Given the research requirements, the choice of the APPED model was mainly due to the fact that it is perfectly in line with what is demanded by this research. The model starts with an analysis of real institutional problems, moves on to strategic planning and product development and finally results in evaluation and dissemination. This format quite well matches the major objective of the research, that is designing a marketing management strategy through an AI-based website and deciding the most effective way of managing study program marketing through the website.

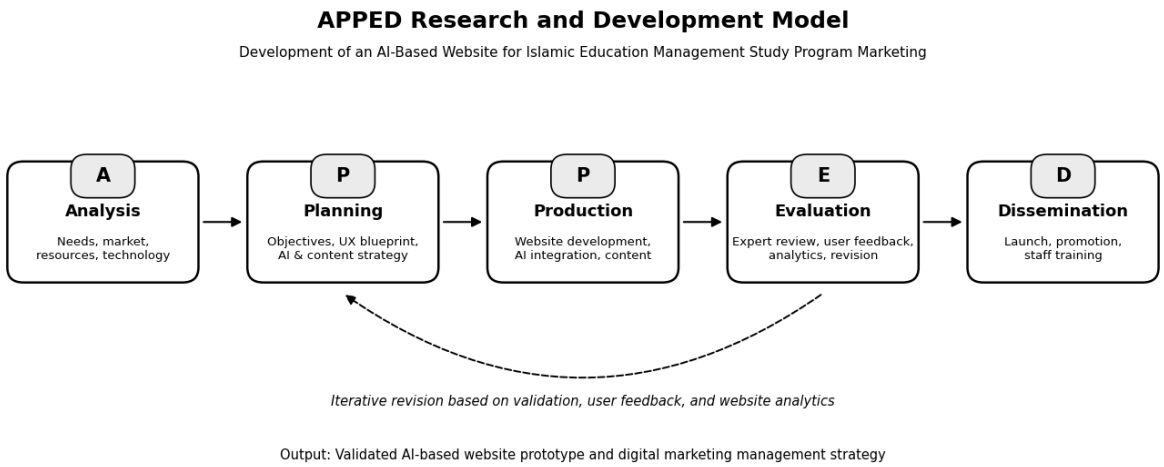

Figure 1. APPED Research and Development Model for AI-Based Website Development

In this study APPED model was considered not just as a technical development method, but also as a methodological framework for integrating research, product design, validation, and implementation. This coincides with recent discussions in design-based research and educational technology where it is emphasized that technology development studies should integrate product creation, iterative evaluation, user feedback, and theoretical contribution. A systematic literature review by Cela-Ranilla et al. (2025) indicates that design-based research has been extensively employed in higher education and educational technology settings for the purpose of developing educational artefacts and producing design principles (Cela-Ranilla et al., 2025).

RESEARCH AND DEVELOPMENT PROCEDURE

The research procedure followed the five stages of the APPED model: analysis, planning, production, evaluation, and dissemination.

A. Analysis

Analysis phase was carried out in order to understand the needs, problems, resources, and technological potentials in regard to the marketing management of the Islamic Education Management Study Program. This phase comprised 4 main activities.

Firstly, a needs analysis was carried out to identify the challenges that the study program was facing in digital marketing. The analysis really concentrated on the limited availability of digital information, the non-existence of a self-studied program website, the lack of human resources for updating the content regularly, and the effort needed to improve the study program's visibility among the potential students.

Secondly, a market analysis was made in order to meet the changes of Islamic higher education, the information-seeking behaviors of prospective students, and the marketing strategies of competitor study programs. This analysis is crucial because digital marketing in higher education should be in line with the behavior of prospective students who are more and more dependent on online information before making their academic decisions.

Thirdly, a resource analysis was done to evaluate the institutional resources available, such as human resources, technological infrastructure, budget capacity, and the ability of program administrators to handle website content. This analysis assisted in setting the reasonable scope for website development and the amount of AI integration that could be done.

Fourthly, a technology analysis was completed to select AI technologies that might be able to facilitate website-based marketing management. The focus of the analysis was the feasibility of AI use for automatic content production, chatbot communication, information personalization, and visitor behavior tracking. It is a fact that that the use of AI-generated content tools is becoming more and more common in higher education and can be a great supporter of content creation, problem-solving, and enhancing digital productivity when used in a strategic manner.

B. Planning

The planning phase was carried out to develop the objectives, structure, features, and content strategy of the AI-based website. The objectives of building the website were decided after the needs analysis. Some of the objectives set were to increase the accessibility of the study program information to the public, raise the regularity of digital content production, enhance the image of the study program, and facilitate marketing activities through digital means.

During this phase, the website blueprint was developed by carefully thinking through the structure of navigation, layout of each page, user experience, different categories of contents, and interactive features. The key contents of the website were study program profile, curriculum information, lecturer profiles, student activities, academic news, alumni stories, achievements, admission information, and frequently asked questions. The AI feature was mainly designed to help content generation so that the administrators can create the first versions of articles, news, or promotional texts based on certain requests.

Another variable of the planning phase was the creation of a digital marketing strategy plan. This plan included content development, the upgrading of search engine rankings, integration with different social media platforms, and the use of website analytics to monitor user behavior. It was kept in mind that the function of AI in the website should not be to replace human editorial control but rather to help the administrators in creating, organizing, and updating the content with more efficiency. This has to be noted as the concern that for the deployment of generative AI in higher education demands institutional readiness, providing clear guidelines, and responsible implementation..

C. Production

During the production phase the actual development of the AI-based website was carried out as per the design created during the planning phase. The production phase included tasks such as building the website integrating it with a database developing the interface setting up the content management system and incorporating AI features.

The AI module was primarily aimed at facilitating automatic content creation. To give the administrator an idea of how it works let's say he/she enters a subject or prompt like “student achievement”, “the excellence of the Islamic Education Management Study Program”, “alumni success story”, or “academic activity report”. The system would be able to produce a draft article or news text which the administrator can then review edit and publish. Besides, this method is supposed to lower the burden on human resources while ensuring that the website content updates keep coming.

Moreover special attention was paid in the development of the website to aspects like usability accessibility content clarity and information relevance. Technical testing was carried out for checking if website menus links content pages forms and AI features were all working properly. Besides production phase also involved creating the first set of content like program profile academic information sample news and promotional materials.

D. Evaluation

The evaluation phase was a step towards understanding the practicality and the overall impact of the AI-powered website by the users. It was a mixture of analyzing both the qualitative and the quantitative aspects.

The qualitative evaluation was primarily through the experts' review and to get first-hand as well as other study program leaders' administrators, users' perspectives through their interviews, suggestions, and observations. After that, the qualitative data was organized and analyzed descriptively to recognize the strengths, weaknesses, and points requiring improvement. The analysis of the study was majorly on the looks of the website,

the relevance of the content, the way of finding one's way around the site, the quality of the AI-generated content, as well as the appropriateness of the site for study program marketing.

The quantitative evaluation was carried out by using validation sheets, questionnaires, and website analytics. The validation was expert assessment from media or website experts, content experts, and marketing management experts. In order to understand users' perceptions regarding the levels of usability, information clarity, the attractiveness, and the usefulness of the website, user questionnaires were used. Apart from that, website analytics assisted in monitoring visitor behavior, including the number of visitors, page views, bounce rate, duration of visits, and conversion-related indicators. The integration of both qualitative and quantitative data was done to assess the feasibility and effectiveness of the developed website.

The evaluation method was repeated a number of times, so that improvement was made through the steps of consolidating experts' validation, users' feedback, and also the data of the website's performance. The iterative revision process is crucial in technology development research because a digital product's quality depends not only on its initial design but also on continuous improvement based on real user experience.

E. Dissemination

The dissemination phase was implemented only after the website had been through the evaluation and modification process. Dissemination of the website included founding, digital marketing, and training of the study program staff. The website was presented as an official digital marketing channel for the Islamic Education Management Study Program.

Promotion was done via digital pathways, for example, social media, institutional networks, and communication related to the admission process. User training was done for admins so that they would be capable of running the website, using AI content production tools, checking AI-produced texts, refreshing data, and figuring out website statistics. This step was very critical to guarantee that the finished product could be employed continuously and not only as a short-lived research output.

DATA COLLECTION TECHNIQUES

Data collection methods included interviews, distributing questionnaire, observing, documenting, and website analytics.

Interviews with study program leaders, administrative staff, marketing related personnel, and prospective students were conducted for gathering marketing needs, information gap, content management problem, AI-based website expectation and effectiveness of the medium as marketing in the form of 15-item questionnaire developed based on the ISO 9241-11 usability framework. Observing 20 users (consisting of 5 staff members and 15 prospective students) while they interact and access the website was done to understand the way users behave and identify usability issues, navigation problems, and user behavior patterns. Documentation helped in gathering the materials related to academic programs, courses, students, student and alumni achievements, and promotional materials.

Website analytics helped in collecting numerical data on the website's performance which included number of visitors, time spent on the site, number of pages viewed, bounce rate, traffic sources, and user engagement along with other data to evaluate the effectiveness of the website as a digital marketing platform.

DATA ANALYSIS TECHNIQUES

The data were analyzed with descriptive qualitative and quantitative analysis. The qualitative data from interviews, observations, expert feedback, and responses to open-ended questions were analyzed by data reduction, data display, and conclusion drawing. The analysis was geared toward the identification of user needs, the strengths and weaknesses of the website, the appropriateness of AI-generated content, and the suitability of the site as marketing management tool.

The quantitative data extracted from the validation sheets, questionnaires, and website analytics were statistically analyzed by descriptive statistics. Results of expert validation and user responses were expressed as percentages to assess the desirability and

usability of the website. Then, the results were classified into different levels of desirability, like very desirable, desirable, less desirable, or not desirable, according to the scoring guidelines of the investigation.

The user responses and website performance indicators were used to measure the level of user satisfaction with the use of the website. The suggestion is that if the website has positive user feedback, clearly provides information, has the ability for users to generate content with the help of AI, and increases digital visibility, then it could be seen as an effective marketing management medium for the Islamic Education Management Study Program.

Data collection utilized structured validation sheets (4-point Likert scale) assessing visual interface, menu architecture, content accuracy, and AI plugin alignment. Content Validity Index (CVI) and percentage of feasibility (P) were calculated using:

$$P = \frac{\sum X}{\sum X_{max}} \times 100\%$$

Feasibility criteria were categorized as Very Feasible (81%–100%), Feasible (61%–80%), Less Feasible (41%–60%), and Unfeasible (≤ 40%). System usability was quantitatively evaluated using the standardized System Usability Scale (SUS) consisting of 10 items scored on a 5-point Likert scale, converted into a percentile usability rank (0–100) (Sauro & Lewis, 2016).

RESEARCH OUTPUT

The primary result of this research was a prototype of a website powered by AI for the Islamic Education Management Study Program at UIN Syekh Wasil Kediri. The site was created as a tool for digital marketing management via information dissemination, content creation, interaction with the target audience, and enhancing the brand of the institution. Moreover, this paper created a marketing planning scheme grounded on the APPED development cycle, which can be used as a hands-on example by other study programs or academic departments that are confronted with the problem of digital promotion and shortage of human resources.

3. RESULTS AND DISCUSSIONS

A. Development of the MPI Study Program Website Using the Modified APPED Model

The development of the AI-based website for the Islamic Education Management Study Program of UIN Syekh Wasil Kediri was done with the Research and Development approach with the APPED model as a guide (Surjono, 2017).

APPED model has five major phases:Analysis, Planning, Production, Evaluation, and Dissemination. This research inserted AI API integration into the production stage which is the main engine for auto-content generation and SEO optimization. A product that besides the lack of a website, a study program with limited human resources for the content regular updating was brought to the attention of the problem.

The researcher can deal with a real institutional problem, create a technological solution, build a working website, research its viability, and share the final product using the APPED model, which is why its selection was relevant here. In fact, the recent publication in educational technology also points out that development models like APPED and R&D-based procedures are very popular to produce and to validate digital learning or information products through systematic analysis, design, production, evaluation, and implementation phases (Cela-Ranilla et al., 2025; Surjono, 2017).

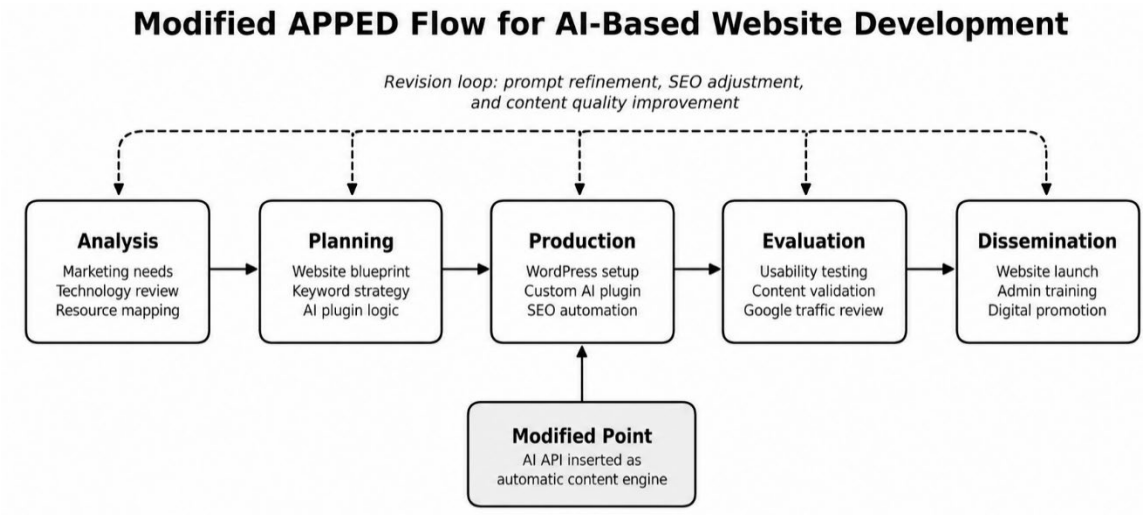

Figure 2. Modified APPED Flow in AI-Based Website Development

As shown in the modified APPED flow, the production phase was in fact the very main feature of this research. In contrast to traditional website development, this work inserted an AI generator plugin into the WordPress-based website. The plugin was aimed at enabling the administrators to generate articles, news, and promotional content solely by means of keywords or topical prompts. This evidence supports the fact that AI can facilitate digital marketing by making it possible to personalization, content automation, customer engagement, and data-driven decision-making (Moharam & Tawalbeh, 2025; Pratama, 2025). Studies on the role of AI in digital marketing demonstrate that AI can be applied to studying consumer behavior, creating user profiles, personalizing content, and enhancing the overall marketing effectiveness (Mikalef & others, 2023; Pratama, 2025).

B. Results of the Analysis Stage

Analysing stage was performed to recognize Marketing needs, technological readiness, and available institutional resources. The result exposed that the Islamic Education Management Study Program required a dynamic website which could work not only as the medium of information but also as a digital marketing platform. The key issues made known were the very limited use of digital marketing, no independent study program website and only a few staff members becoming able to update content regularly.

Table 1. Marketing Management Analysis Phase

Analysis Component	Key Findings	Basis for Website Development
Marketing Needs Analysis	Conventional marketing was less efficient, while regular content updates were constrained by limited human resources.	The website needed to be dynamic and equipped with content automation features.
Technology Analysis	WordPress was selected because of its flexibility, ease of management, and API compatibility.	WordPress was used as the website backbone, while generative AI was used for content generation and SEO support.
Resource Analysis	The study program had limited technological human resources and needed a system that could be operated by non-technical staff.	The AI plugin needed a simple interface based on prompts or keywords.

Analysis phase showed that the main problem of marketing management in the MPI Study Program was very likely connected to the issue of information management. In the absence of a dynamic and regularly updated website, the study program's academic activities, achievements, alumni stories, and institutional strengths were not communicated effectively to potential students.

In higher education marketing, the digital presence is crucial as potential students are increasingly using online sources of information as their main factor in deciding on a study program (Juhaidi, 2024; Pawar, 2024). A latest study on digital marketing in higher education highlights that digital marketing plays a role in student recruitment, enhancing institutional competitiveness, and raising global visibility as well.

C. Results of the Planning Stage

During the planning phase the team concentrated mostly on deciding the website structure, user experience, content strategy, and planning AI integration schedule. To meet the needs of prospective students, the website was planned with a user-friendly menu of information made available in the fastest way, among those are study program profile, curriculum, lecturer profiles, academic events, alumni, and admissions. Content planning was aligned with a philosophy of customer-centric marketing that stated that in order to meet the needs, interests, and journey of prospective students, the information should be relevant.

At this point, we have identified several main keywords such as "career prospects of MPI graduates, " "MPI curriculum, " "Islamic education management, " "MPI scholarships, " and "alumni success stories." Subsequently, these target keywords became inputs for AI-driven tool. The introduction of AI tool was expected not only to help in generating content but also in supporting optimization aspects of a website including creating article title, meta description, focus keyword, and monitoring keyword density. In fact, this aligns with the growing role of AI in digital marketing as a partner of content personalization, campaign optimization, and user experience enhancement.

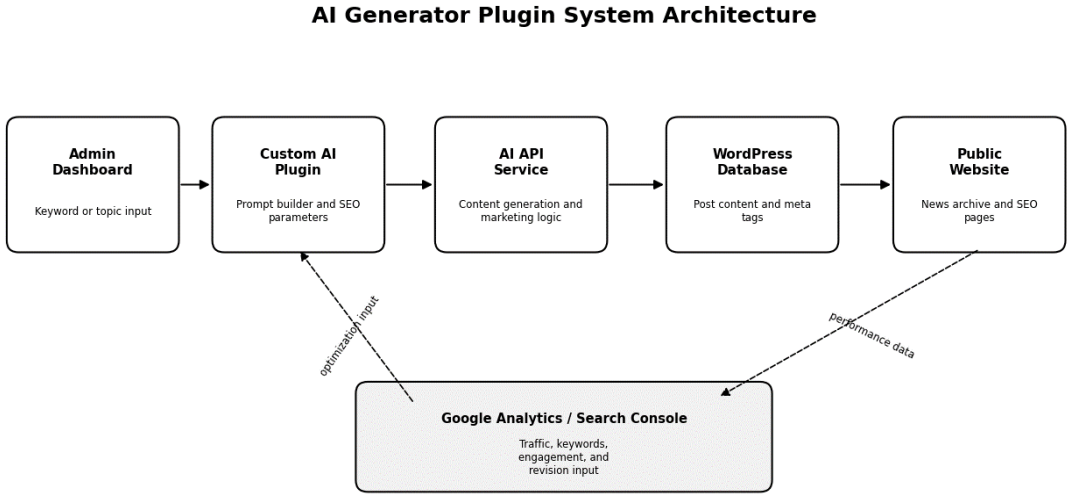

Figure 3. AI Generator Plugin System Architecture

In Figure 3 illustrates the technical workflow of the AI generator plugin. The chain of events initiates with the administrator providing a topic or a keyword via the WordPress dashboard. The tailored AI plugin subsequently turns the user input into a well-devised prompt featuring marketing logic, target audience, and SEO parameters. It sends the query to the AI API service which, after processing it into a full-fledged article, returns it to the WordPress database as either a post draft or ready-to-publish content.

After being posted on the website, the content is also tracked via analytics tools. The diagram portrays the AI-based website as a computerized information system integrating different functions. It entails web management, content creation via automation, SEO tuning, and traffic tracking. Employing the Resource-Based View perspective, such systems are digital strategic resources that are capable of supporting the institution's capacity, lessening the operation's dependency on scant human resources, and enhancing the competitive position (Krakowski et al., 2023; Mikalef & others, 2023).

D. Results of the Production Stage

A WordPress-based website with a tailored AI generator plugin was the outcome of the production phase. The reason WordPress was chosen is that it is very adaptable, quite simple to manage, and allows for plugin-based development. The website was set up in such a way that it could show institutional information along with fresh news content. After this, the AI plugin was added to the WordPress dashboard so that administrators could use it to generate content automatically.

The principal deliverable created in this phase was the Automated Content Generation feature. By using this feature administrators could type in a word or topic, for example, "value proposition of MPI, " "career prospects of MPI graduates, " or "student achievement, " and the AI program would produce a draft article. In addition, the system was geared towards AI-enabled SEO enhancement, such as automatic title creation, meta description, and focus keyword incorporation. Research on AI-generated content and SEO indicates that AI-produced content can assist in search visibility and user interaction, however, human oversight is still required to ensure accuracy, authenticity, and contextual relevance (Miao & Holmes, 2023; Moharam & Tawalbeh, 2025; Ziakis & Vlachopoulou, 2024).

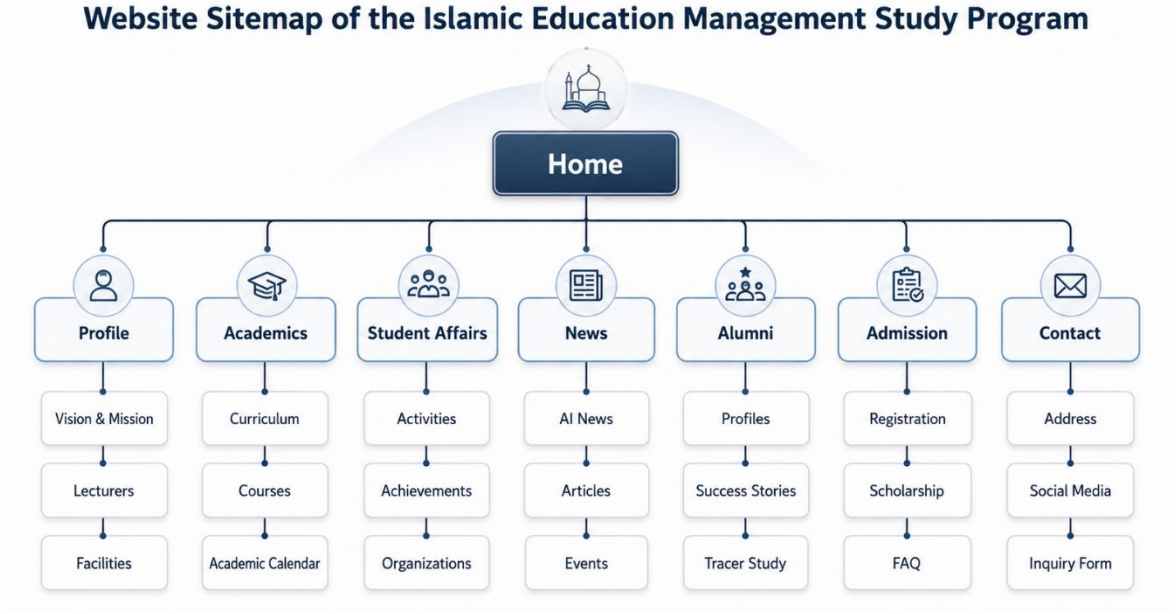

Figure 4. Islamic Education Management Study Program Website Sitemap

The sitemap in Figure 4 reveals that the webpage's framework was planned according to the information needs of the potential students. Therefore, crucial menus like Profile, Academics, News, Alumni, Admission, and Contact were given first-level main navigation positions. This layout indicates a commitment to the principle of user experience, which advocates that users should be able to locate key information with as few navigation steps as possible (Hasson et al., 2024; International Organization for Standardization, 2018).

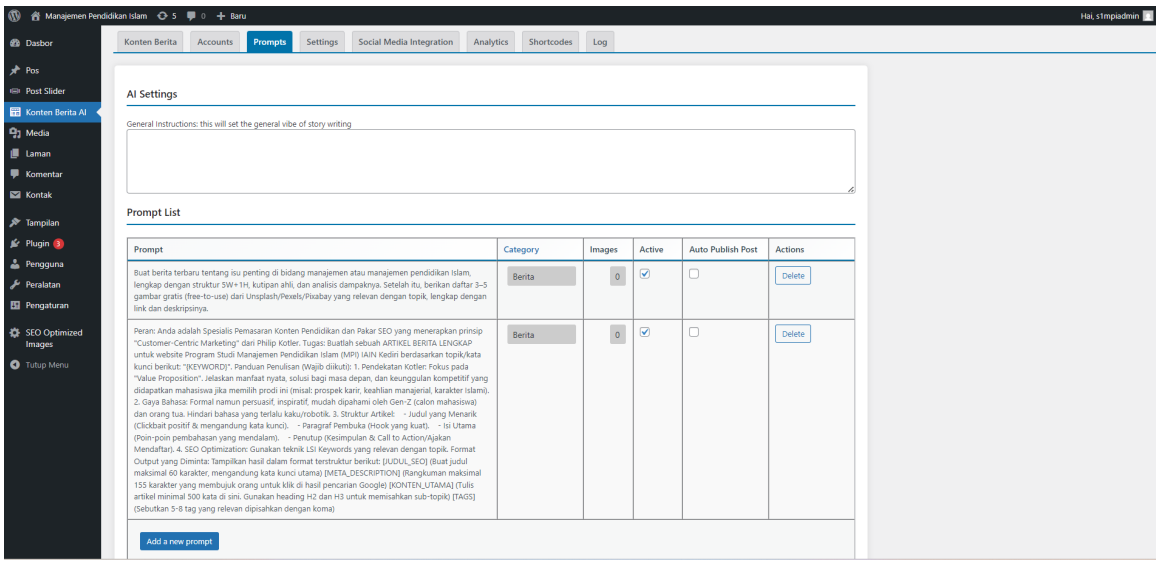

Figure 5. AI Settings Panel

The AI settings panel is depicted in Figure 5. Here the administrator is asked to enter various components such as topic, target audience, marketing angle, SEO keyword, and content tone. This straightforward interface was created with non-technicians in mind so that they could easily operate the system. Additionally, prompt-based input enabled the AI to develop content that better met the marketing requirements of the study program.

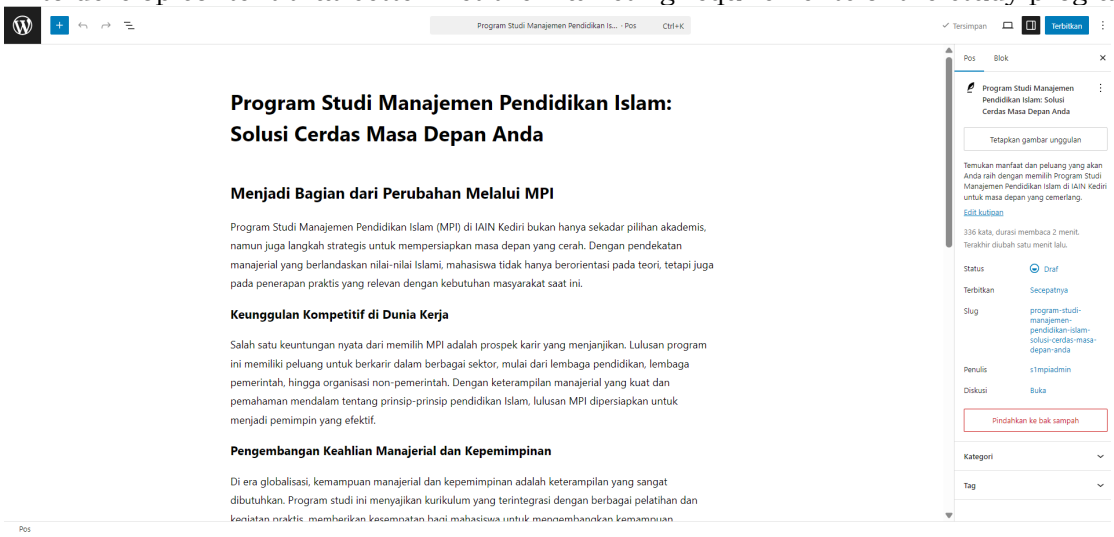

Figure 6. Generated Output by AI

Figure 6 depicts the output of content created by AI. This piece of writing that the AI produced contained a title, an opening paragraph, the body text, and a part for SEO. Such a reaction suggested that the AI feature might assist the managers in making organized promotional materials quickly. But then, the generated content had to be checked by human, first of all, to verify facts, maintain formal tone, and be compatible with the academic character of the MPI Study Program.

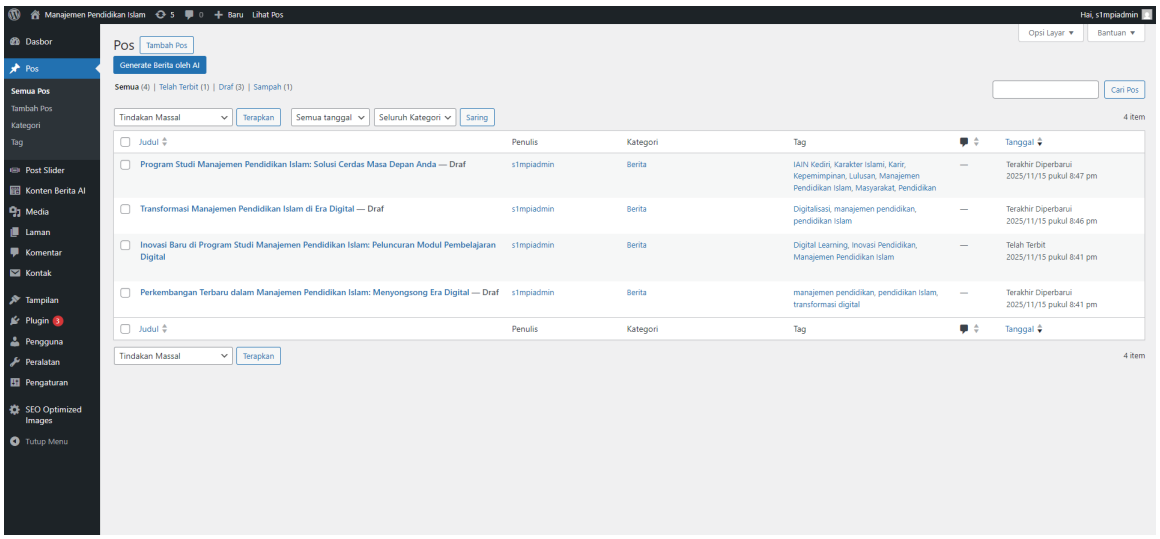

Figure 7. News Archive Page

Figure 7 displays the news archive page. The archive was a reflection of the website's wide range of content, covering everything from academic information to student achievements, alumni stories, admission and scholarships info and academic events. This finding is significant as one of the initial challenges was the infrequency of website updates. With AI assistance, content generation is more streamlined, the site is able to look more energetic and vibrant (https://s1mpi.iainkediri.ac.id/).

E. Results of the Evaluation Stage

Evaluation has been a stage of checking the overall performance of the website. It is a thorough assessment of the effectiveness of the website and the quality of the AI-generated content through both quantitative and qualitative indicators. Users' usability testing and the observation of loading speed were used for assessing website feasibility. Content effectiveness was done through interviews with staff and content reviewers. Marketing performance was observed through quantitative website traffic data extracted directly from Google Analytics and Google Search Console.

The evaluation phase yielded empirical evidence supporting the feasibility and operational effectiveness of the AI-powered website:

1. Expert Validation Scores: The product achieved an average validity score of 88.5% across all domains (Media Expert: 90.0%, Content Expert: 86.0%, Marketing Expert: 89.5%), classifying the platform as 'Very Feasible' for public deployment without structural modifications.
2. Usability Testing : Testing with prospective students (n = 20) yielded an average System Usability Scale (SUS) score of 82.4 out of 100, placing the website in the 'Grade A / Excellent' usability category (Hasson et al., 2024; Sauro & Lewis, 2016).
3. Website Analytics Performance (Pre vs. Post Implementation): A 3-month post-launch analytic tracking showed a quantitative surge in marketing metrics compared to baseline data:
    a. Monthly Organic Visitors: Increased from <45 to 620 visitors (+1,277%).
    b. Average Session Duration: Increased from 0:42 minutes to 3:15 minutes.
    c. Bounce Rate: Decreased from 78.0% to 41.2%, indicating significantly improved user engagement and navigation clarity.

To comprehensively assess the overall performance, feasibility, and impact of the AI-powered website, a systematic evaluation was conducted using a hybrid of quantitative and qualitative indicators. This phase integrated usability testing, expert validation, qualitative staff interviews, and direct web analytics monitoring to ensure the system met both technical standards and marketing objectives. A concise summary of the evaluation metrics, measurement techniques, main analytical focus, and synthesized results is presented in following table

Table 2. Summary of The Evaluation Metrics

Evaluation Metric	Measurement Technique	Main Focus	Summary of Results
Website Feasibility	Quantitative analysis through usability testing and loading speed observation.	Ensuring that the website provides an optimal user experience.	The assessment revealed that the website operates efficiently, providing an optimal user experience for digital marketing activities compared to traditional methods.
Effectiveness of AI-Generated Content	Qualitative analysis through interviews with staff and content reviewers.	Ensuring that AI-generated content is accurate, relevant, and attractive for prospective students.	AI significantly lightened administrators' workload in content creation; however, human editorial oversight is still required to ensure the accuracy and authenticity of academic information.
Marketing Performance	Quantitative analysis using Google Analytics and Google Search Console.	Measuring visitor growth as an indicator of improved study program visibility.	Website analytics showed an increase in organic visitor traffic and boosted digital visibility in search engines driven by AI-generated and SEO-optimized content.

The assessment revealed that the website could facilitate digital marketing activities quite efficiently compared to traditional methods. The AI content creation component, for instance, was instrumental in lightening administrators' work, and SEO optimization was a factor in boosting the visibility of content in search engines. On the other hand, the evaluation brought out an aspect related to the value of human editorial oversight. Although AI is a content accelerator, human intervention to check the authenticity and accuracy is still required to keep up the trustworthiness of scholarly data (Hasson et al., 2024; International Organization for Standardization, 2018).

F. Results of the Dissemination Stage

The dissemination phase took place after the website had been modified after the evaluation findings. The website was made accessible as a public information and marketing platform of the MPI Study Program. Besides, study program staff were given training on how to operate the AI plugin on their own. They were trained on how to enter keywords, choose marketing angles, check AI-generated drafts, publish content, and track website traffic.

This phase matters a lot because even though technology is very important, the survival of a website also depends on staff competency to manage it. Having a website that is technically good but not regularly updated will certainly fail to serve as a marketing platform. Hence, the dissemination stage was mainly focused on institutional readiness and operational continuity.

G. AI, SEO, and Digital Marketing Strategy

Using AI and SEO on the MPI website resulted in three main marketing strategies: content automation, SEO optimization, and platform dynamism. These strategies are grounded on the theory of marketing management most of all marketing creating, communicating, and having superior value to target audiences (Kotler et al., 2022).

Table 3. Relevancy of AI/SEO to Marketing Theory

Strategy	Role of AI/SEO	Relevance to Marketing Theory
Content Automation	The AI plugin generates informative articles based on MPI-related keywords, such as program strengths, student achievements, and alumni profiles.	Supports consistent value communication and overcomes human resource limitations in information management.

Strategy	Role of AI/SEO	Relevance to Marketing Theory
SEO Optimization	AI integrates strategic keywords into article titles, content, and meta descriptions.	Helps the study program reach prospective students who search for MPI-related information through search engines.
Platform Dynamism	The website can be updated regularly without excessive manual work.	Builds an image of the study program as responsive, modern, and adaptive to digital transformation.

These results confirm the research previously done on AI in digital marketing that states, among others, that AI can make personalization more effective, improve campaign performance, enhance user engagement, and help decision-makers better. AI makes it possible for institutions to handle user data, recognize patterns, and supply target audiences with even more relevant content. On the other hand, it has been recognized that in higher education, digital marketing is a very effective vehicle for student recruitment, education, competition, and increased public awareness (Cingillioglu et al., 2024; Pawar, 2024).

Besides, the study found that more visitors came to the website after it was created and filled with AI-generated SEO-optimized content. Since there is no actual number of web visitors provided in the paragraph, the result should be carefully written only as a hint to the increased traffic and not a definite statistical statement (Manisha, 2024; Ziakis & Vlachopoulou, 2024). The increase in traffic shows that AI-aided content writing and SEO can greatly help a university achieve better digital visibility and this is so especially if the content is in line with the search behavior of prospective students (Kotler et al., 2022; Pawar, 2024).

H. Discussion Based on the 7P Marketing Mix

The development of the AI-based website can further be dissected via the 7P marketing mix framework: Product, Price, Place, Promotion, People, Process, and Physical Evidence (Febriansah, 2024; Juhaidi, 2024). As for the higher education services, the 7P framework is very much in line with the needs of the industry since educational marketing is not solely focused on the promotional side, but also on how academic institutions can convey the value of the curriculum, quality of service, ease of contact, human resources, and the overall reputation of the institution. The most recent research studies on marketing of higher education also take the 7P framework as a tool to study how educational institutions affect the student decision-making process.

Table 4. Marketing Implication from Implementation Through AI-Based Website

7P Element	Implementation through AI-Based Website	Marketing Implication
Product	The website presents the curriculum, graduate profile, academic activities, and program strengths in a more narrative and attractive format.	The study program is communicated not only as an academic unit, but as a solution for prospective students' future careers.
Price	The website provides information on tuition, scholarships, and the value of studying in the MPI Program.	Prospective students can understand the educational cost as an investment, not merely as an expense.
Place	The website functions as a digital access point that can be reached anytime and from anywhere.	The study program's information is no longer limited by geographical distance or office hours.
Promotion	AI-generated articles and SEO optimization support search-based promotion.	The study program can attract prospective students organically through relevant search keywords.

7P Element	Implementation through AI-Based Website	Marketing Implication
People	Lecturer profiles, staff information, and alumni stories are displayed and narrated more effectively.	The credibility of the study program is strengthened through the visibility of its academic community.
Process	Navigation, content access, and information search are designed to be simple and efficient.	A smooth user experience creates a professional impression of the study program.
Physical Evidence	The website interface, news archive, and updated content function as digital evidence of institutional activity.	A regularly updated website strengthens public trust and shows that the study program is active and well-managed.

Product-wise, the AI website acts as a bridge to converting academic products into engaging stories. Through example, curriculum details can be turned into articles featuring the different career paths MPI students are ready for such as becoming Islamic education managers, school leaders, or educational consultants. Actually, this is necessary since most prospective students crave good enough explanations in layman's terms that are not only formal curriculum listings.

Price-wise, the website can assist in the marketing of tuition fees, scholarships, and the enduring benefits of studying at MPI Program. Texts created by AI could be utilized to discuss educational investment, career development, and scholarships. Users in this situation are most likely parents and students who need a better understanding of the value of the educational cost.

Place-wise, a website is a great service channel in virtual form. It allows prospective students who are geographically dispersed to obtain information without making a physical visit to the campus. The first point of contact between prospective students and a study program nowadays is often through search engines or institutional websites, so such a feature of a campus website was to be expected.

Promotion-wise, the report illustrated that AI and SEO have been the two most vital features capable of changing the marketing landscape through introduction of more advanced scientific techniques. Conventional promotion tends to depend on brochures, banners or direct visits, whereas the AI-assisted SEO will enable the study program to attract prospective students through organic search. Indeed, this concept of inbound marketing means that users are coming to your website because they are looking for the relevant information.

People-wise, the website helps to bring lecturers, students, alumni, and administrative staff to the forefront of one's mind. AI could be used to make lecturer achievements or alumni stories more engaging and presentable public narratives. Indeed, in service marketing there is a strong notion that people are one of the very elements of perceived quality of the service.

Process-wise, based on the sitemap and navigation structure, one can assume that the website was aimed at simplifying one's information-seeking process. Data such as curriculum, admissions, scholarship, and alumni profiles was placed in user-friendly menu structures. This gives a great boost to user experience and may as well affect users' initial attitude towards the study program.

Physical Evidence-wise, the website becomes a digital testimony to the institution's recognition. In a way, educational services are intangible; thus prospective students will be looking for concrete signs through which they can make their judgment as to the quality of a given service. In such a case, a sophisticated-looking interface, a well kept-up-to-date news archive along with the articles, and academic info that is succinct can be seen as the digital physical evidence.

I. Theoretical and Practical Implications

This work theoretically supports the evolution of digital marketing management in higher education sector by illustrating how AI can play a part in marketing through websites. The conclusions of this work are in line with the statement that digital platforms have turned from merely communication tools into strategic resources that can enhance

competitiveness of institutions. AI usage as a tool for content creation and SEO optimization enlarges the scope of customer-centric marketing in HE.

According to the Resource-Based View, AI-driven websites may be regarded valuable digital assets since they allow the academic program to tackle internal constraints, particularly the scarce human resources for content production. The platform also fosters product differentiation because only few similar academic programs possess an AI-supported content management system. With a proper and sustainable management, this feature can turn into a major competitive advantage.

In real terms, the research outlines a roadmap for academic departments that experience the same issues: staff shortage, low digital visibility, and irregular website updates. The combination of WordPress, tailor-made AI plugin, SEO tactics, and analytics watchdog provides a down-to-earth and repeatable solution for educational institutions with scarce resources.

Overall, the application of the seven elements of the marketing mix (7P) above indicate that the inclusion of AI-driven site development may be a very potent element for marketing management in the Islamic Education Management Study Program. The website that results from the implementation of a new version of APPED model is capable of merging information management, automatic content generation, SEO optimization, and traffic control all in one system. The use of an AI generator plugin is a great solution to resource human limitation issue, at the same time, the website structure is a lot better for information access by prospective students.

Besides that, the debate also reveals that the website's success is not attributed to technology alone. Its performance is subjected to factors such as content strategy, keyword selection, human review, staff training, and continuous evaluation. Consequently, AI should be perceived as a tool for help instead of a total replacement of human judgment. Turning to academic marketing, AI may support quick content generation, yet the study program should retain the control over the accuracy, ethics, tone, and institutional identity of the content.

These results, in essence, suggest that the AI-powered website can be a very instrumental tool in the strategy package of the MPI Study Program at UIN Syekh Wasil Kediri for raising its visibility, image, and competitiveness. The fusion of AI, SEO, and marketing management that is website-based gives a solid and practical way of facing digital transformation challenges in the field of higher education.

4. CONCLUSION

This study concludes that the development of an AI-based website for the Islamic Education Management Study Program at UIN Syekh Wasil Kediri represents a strategic innovation in educational marketing management. Using the APPED development model (which includes Analysis, Planning, Production, Evaluation, and Dissemination), the website was thoroughly planned not simply as a digital information platform, but also as a marketing management tool that is integrated. Artificial Intelligence being part of the website enhanced the program's capabilities in handling information, generating marketing content, and establishing a more engaging digital presence.

Introducing AI-driven marketing management has indeed changed the marketing approach of MPI Study Program from traditional, manual, and human-resource-dependent to a more advanced, automated, and data-oriented manner. By adopting customer-centric marketing, AI generator plugin was instrumental in content production that not only provides general information but also communicates the value propositions of the study program, such as academic excellence, graduate prospects, student achievements, and institutional identity. It was able to create content that really met the needs, interests, and expectations of prospective students.

From a managerial view, the AI-powered website offers a handy remedy to one of the main pitfalls in study program marketing management, which is the limited human resources capacity to regularly update website content. Implementing the feature of content auto-generation means that administrators are able to produce news articles and promotional pieces by simply inputting particular keywords or topics. This is not only a time-saving feature but also ensures uninterrupted information updates. In other words, the website is a strategical information management system, facilitating consistency, rapidity, and sustainability of digital communication.

This paper also reveals that the AI-powered website has the potential in enhancing the MPI Study Program's competitiveness. In strategic management perspective, the website acts as a digital tool that aids visibility, institutional image, and differentiation. It is a significant organizational asset to be able to simultaneously automate content, optimize SEO, and manage website-based information. Hence, this website development should be seen as an institutional strategy for enhancing marketing performance, service quality, and public trust in the digital era, not just a mere IT project.

However, it is clear that human monitoring is still necessary in the use of AI in academic marketing. AI, indeed, can help in speeding up content production, but human administrators must exercise control over the content's correctness, relevance, tone, and ethical quality. Hence, human-in-the-loop concept is imperative in the governanc of AI-generated content. Administrators have to ascertain the accuracy of facts, change the language style if required, and make sure that all the published information is a reflection of the academic credibility and the institutional values of the study program.

Following these conclusions, a few recommendations can be made. Firstly, the MPI Study Program management should keep running the website as a marketing platform strategically and not simply as a formal digital profile. For this, website administrators are to update keywords regularly based on search trends, monitor website traffic, and evaluate the efficacy of published content. This will make certain that the website is meeting the prospective students' needs and is keeping up with the changes in the digital environment.

Secondly, it is highly recommended that the researchers and system developers in the future pay more attention to enhancing the AI plugin's technical abilities. Further development could, for example, include the production of multimedia content, such as the automated creation of images, infographics, short promo videos, and visual summaries that can make articles on the website more attractive. Besides, doing a fine-tuning of the AI model with the use of the internal institutional data of UIN Syekh Wasil Kediri is a good idea, as the content being generated will be more contextually accurate, relevant to the institution, and less robotic in style.

Thirdly, on an institutional scale, UIN Syekh Wasil Kediri ought to view this model as a potential one for other study programs or academic units. The achievement of this AI-based website development demonstrates that artificial intelligence can be an effective tool for institutional communication, digital branding, and educational marketing management. However, widespread implementation will need stronger server infrastructure, clear operational procedures, and institutional policies concerning the ethical use of AI in public communication. With sufficient managerial backing, this innovation has the potential to be a part of the university's long-term digital transformation strategy.

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