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OPTIMIZING DIGITAL MARKETING STRATEGIES AND ACADEMIC SERVICE QUALITY BASED ON THE KANO MODEL FOR IMPROVING STUDENT SATISFACTION

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Abstract: This study examines how optimizing digital marketing strategies and academic service quality, based on the KANO Model, can enhance student satisfaction in higher education institutions. The research addresses the growing challenge of aligning institutional digital engagement with students' evolving expectations. Using a Narrative Literature Review (NLR) approach, data were derived from relevant journals, books, and academic studies exploring digital marketing, service quality, and satisfaction dynamics. The findings reveal that the integration of marketing and service quality forms a synergistic ecosystem that significantly improves student trust and loyalty. The study concludes that effective satisfaction enhancement requires not only technological innovation but also empathetic, value-driven academic services supported by continuous evaluation using the KANO framework.

Keywords: Digital Marketing Optimization, KANO Model, Student Satisfaction.

INTRODUCTION:

In the era of rapid digital transformation, higher education institutions face major challenges in maintaining and improving student satisfaction. Competition among universities is no longer determined solely by academic quality but also by the institution's ability to manage digital marketing strategies and academic service quality effectively. Many universities still rely on conventional promotional methods that fail to reach digital-native generations, while students increasingly demand academic services that are faster, more transparent, and more personalized. The mismatch between student expectations and the services received often leads to a decline in loyalty and retention rates. Furthermore, weak digital communication strategies frequently cause institutional reputations to stagnate or even deteriorate in the public eye. Therefore, enhancing

the effectiveness of digital marketing strategies integrated with the improvement of academic service quality has become an urgent necessity for higher education institutions to remain competitive and sustainable within a modern, technology-driven educational environment(Rakhmadi et al., 2026).

Previous studies have widely discussed the importance of digital marketing strategies and service quality in improving customer satisfaction, including within higher education settings. Theories such as the *Service Quality* (SERVQUAL) model and the *Technology Acceptance Model* (TAM) have been frequently used to assess user perceptions and satisfaction with technology-based services. However, most of these studies focus primarily on measuring satisfaction levels without considering the diverse characteristics of student needs. Conventional models tend to be linear and are often unable to identify the specific attributes of services that uniquely affect student satisfaction. In this regard, the *KANO Model* offers a more comprehensive approach, as it classifies student needs into categories such as *must-be*, *one-dimensional*, and *attractive attributes*. Unfortunately, the application of the KANO Model in the context of digital marketing for higher education remains limited. Therefore, there is a pressing need for research that integrates digital marketing strategies with academic service attribute analysis based on the KANO Model to better understand the factors that truly determine student satisfaction(Buffon, 2025).

This study aims to optimize digital marketing strategies and academic service quality using the *KANO Model* approach to improve student satisfaction in higher education institutions. Specifically, the research seeks to identify academic service attributes that most significantly influence student satisfaction and to analyze how the implementation of effective digital marketing strategies can enhance students' positive perceptions of the institution. Consequently, this study is expected to provide both a conceptual and empirical framework that can serve as a reference for universities in designing targeted digital marketing strategies and academic service systems that align with student preferences and expectations. Furthermore, the findings of this study are anticipated to offer valuable insights for policymakers and institutional managers in formulating strategic initiatives to strengthen institutional reputation and student-centered service excellence(Masnar & Namoco, 2024).

Based on the empirical facts and theoretical gaps previously discussed, it can be assumed that optimizing digital marketing strategies and improving academic service quality play a crucial role in enhancing student satisfaction and institutional competitiveness. This research is essential because there remains a significant gap between the digital marketing practices employed and

students' perceptions of the academic service quality they receive. By employing the *KANO Model*, this study hypothesizes that certain academic service attributes have a significant impact on student satisfaction and can be optimized through appropriate digital marketing approaches. The main argument of this research is that integrating digital marketing strategies with quality improvement initiatives based on student preferences can not only increase satisfaction but also foster long-term loyalty toward the institution. Therefore, this research is highly relevant and strategic in addressing the competitive challenges faced by higher education institutions in the digital era, which demands innovation, adaptability, and a student-oriented perspective

METHODOLOGY:

Research Object

The primary object of this study focuses on the phenomenon of how higher education institutions can optimize their digital marketing strategies and academic service quality to enhance student satisfaction. The issue arises as many universities struggle to integrate marketing technologies with effective academic service management. In the contemporary digital landscape, students act not only as learners but also as informed consumers who evaluate institutional credibility through online interactions and service experiences. This dynamic creates a phenomenon in which traditional academic services often fail to meet the expectations of students accustomed to instant and personalized digital engagement. Consequently, the research problem centers on understanding the gap between the current digital marketing performance of universities and the actual satisfaction levels perceived by students. The study thus explores this dual dimension— digital marketing optimization and academic service quality—through an in-depth examination of existing literature, identifying how these two elements can be synergistically improved to support student satisfaction and institutional competitiveness(Ömürgönülşen et al., 2020).

Research Type and Data Sources

This study adopts a *Narrative Literature Review (NLR)* approach as the core research method. As a library-based study, the NLR method allows the researcher to gather and synthesize relevant scholarly works concerning the identified phenomena without applying highly rigid or systematic selection criteria. Primary data consist of peer-reviewed journal articles and empirical research discussing digital marketing strategies, academic service quality, and student satisfaction in higher education contexts. Secondary data are derived from textbooks, academic reports, and theoretical publications that elaborate on the fundamental concepts associated with

the study's keywords—*Digital Marketing Optimization*, *KANO Model*, and *Student Satisfaction*. Unlike systematic literature reviews, NLR enables flexibility in selecting, interpreting, and connecting diverse sources to construct a comprehensive conceptual narrative. This interpretative nature of the method allows for deeper exploration of contextual insights while acknowledging the potential for subjectivity based on the researcher's analytical interpretation(Liu et al., 2021).

Theoretical Foundation

The theoretical foundation of this study draws from three major frameworks: *Digital Marketing Theory*, *Service Quality Theory (SERVQUAL)*, and the *KANO Model of Customer Satisfaction*. The *Digital Marketing Theory*, initiated by Philip Kotler (2017), emphasizes the integration of digital platforms as strategic tools to enhance customer engagement and institutional visibility. The *SERVQUAL Model*, developed by Parasuraman, Zeithaml, and Berry in 1988, identifies five dimensions of service quality—reliability, responsiveness, assurance, empathy, and tangibles—as the main predictors of customer satisfaction. Complementing these is the *KANO Model*, introduced by Noriaki Kano in 1984, which categorizes service attributes into three major types: *must-be attributes* (basic expectations), *one-dimensional attributes* (performance-related factors), and *attractive attributes* (unexpected delights). Together, these theories form the conceptual lens through which the study interprets how digital marketing and academic service quality interact to influence student satisfaction. The integration of these theoretical models provides a robust analytical foundation for evaluating the multidimensional aspects of higher education service experiences in the digital age(Chen & Zheng, 2023).

Research Process and Data Collection

The research process in this Narrative Literature Review followed a descriptive and flexible procedure rather than a strictly structured protocol. Initially, the researcher identified the central research topic and formulated guiding questions related to the optimization of digital marketing and academic service quality within higher education institutions. Subsequently, relevant literature was collected through academic databases such as Scopus, ScienceDirect, and Google Scholar, focusing on publications from the last ten years to ensure recency and relevance. The search employed a combination of keywords, including "digital marketing in higher education," "academic service quality," and "student satisfaction." Inclusion and exclusion criteria were applied flexibly, allowing the researcher to include both empirical and conceptual works that contributed meaningfully to the understanding of the topic. Each selected source was carefully

read, analyzed, and interpreted to construct a coherent narrative that represents the evolution, interconnection, and critical insights of the topic under study. The process emphasized thematic synthesis over quantitative aggregation, aligning with the interpretative essence of NLR research(Al-Makssoossi, 2022).

Data Analysis Technique

The data analysis technique employed in this study is content analysis, which involves identifying, interpreting, and synthesizing key ideas, themes, and relationships emerging from the reviewed literature. In line with the qualitative nature of the Narrative Literature Review, the analysis process focused on conceptual depth rather than numerical validation. Each source was examined for recurring patterns related to digital marketing optimization, the application of the KANO Model, and student satisfaction factors. These patterns were then grouped and compared to reveal conceptual linkages and theoretical consistencies across different studies. The analysis also involved critically evaluating how various authors addressed gaps in previous models, especially concerning the integration of marketing strategies and service quality dimensions. The ultimate goal of this content analysis was to produce a synthesized understanding that captures both the diversity of scholarly perspectives and the unified conceptual direction emerging from them. This analytical approach ensures that the final narrative reflects a comprehensive and nuanced portrayal of the research topic while maintaining academic rigor and contextual relevance(Arafat, 2024).

RESULTS AND DISCUSSION:

The findings of this study reveal that the optimization of digital marketing strategies plays a critical role in enhancing institutional visibility, engagement, and ultimately student satisfaction. From the reviewed literature, it was found that digital platforms such as social media, university websites, and online learning portals function not only as promotional tools but also as channels for service interaction and relationship building between institutions and students. Studies consistently indicate that institutions adopting data-driven marketing approaches—such as personalized content, search engine optimization, and targeted advertising—achieve higher levels of engagement and conversion among prospective students. Furthermore, the integration of technology-based communication systems has significantly improved the responsiveness of institutions in addressing student inquiries and feedback. These outcomes collectively demonstrate that digital marketing is no longer an auxiliary function but a strategic pillar that

influences students' perception of institutional quality and credibility. The overall result underscores the importance of developing a holistic digital ecosystem that aligns marketing, service delivery, and academic support processes to ensure student satisfaction and long-term institutional sustainability(Umano et al., 2024).

A deeper analysis of the literature shows that effective digital marketing strategies in higher education rely heavily on personalization and authenticity. Universities that emphasize student-centered narratives in their digital communication tend to establish stronger emotional connections with their audiences. For example, storytelling that showcases student success stories, community involvement, and innovation initiatives has been shown to enhance perceived trust and institutional loyalty. Moreover, the use of analytics and social media monitoring tools allows universities to track engagement patterns and optimize their content strategies in real time. Institutions implementing omnichannel marketing—integrating email campaigns, social media platforms, and web-based advertisements—have also reported substantial increases in student recruitment and retention rates. These findings suggest that the success of digital marketing depends not only on technological tools but also on the alignment between institutional values and the digital messages conveyed. Consequently, the literature emphasizes the need for higher education institutions to adopt adaptive, data-informed, and emotionally resonant marketing strategies to remain competitive in the digital era(Shemshaki, 2024).

The reviewed studies further confirm that the quality of academic services significantly influences student satisfaction, particularly in how students perceive institutional credibility and reliability. Service quality encompasses not only administrative responsiveness but also pedagogical support, communication transparency, and accessibility of learning resources. Research indicates that when institutions implement efficient academic management systems—such as online course registration, digital academic advising, and feedback systems—students report higher satisfaction levels due to reduced administrative burdens. Furthermore, service quality is strongly linked to perceived fairness, empathy, and trustworthiness, which are crucial dimensions of the SERVQUAL model. The findings suggest that students interpret service quality as a reflection of institutional commitment to their overall learning experience. Thus, improving academic service quality through user-friendly technology, timely communication, and professional academic support enhances not only satisfaction but also student loyalty, thereby contributing to long-term institutional reputation and retention outcomes(Dutt et al., 2024).

The KANO Model, as reflected in the reviewed literature, has proven highly effective in

identifying and categorizing student needs within academic and service contexts. Studies applying the KANO framework demonstrate that students' satisfaction levels vary depending on whether their expectations are met through *must-be*, *one-dimensional*, or *attractive* attributes. *Must-be attributes* include essential services such as clear communication, academic transparency, and administrative efficiency—elements that, if missing, lead to dissatisfaction. *One-dimensional attributes* refer to aspects like digital accessibility, prompt responses, and course flexibility that directly increase satisfaction when performed well. Finally, *attractive attributes* encompass unexpected services, such as personalized mentoring or gamified learning experiences, which generate delight even if students did not explicitly demand them. The literature thus reveals that understanding these differentiated attributes enables institutions to prioritize service improvements that most effectively drive satisfaction. The KANO-based categorization offers a valuable lens for integrating digital marketing insights with service design strategies, ensuring that institutional efforts align with what students truly value(Sugiharto et al., 2025).

Findings across multiple studies indicate that the intersection of digital marketing and academic service quality produces a synergistic effect on student satisfaction. Digital marketing initiatives, when aligned with superior academic service quality, create a consistent institutional image that reinforces student trust and engagement. For instance, when digital campaigns highlight academic excellence and innovation, and those promises are reflected in actual service delivery, student satisfaction levels rise significantly. Moreover, digital platforms serve as two-way communication channels, allowing institutions to gather feedback and immediately adjust service offerings. The reviewed literature emphasizes that universities with integrated digital marketing and service management systems achieve better performance metrics in student retention and institutional reputation. Therefore, the synergy between these two domains suggests that marketing efforts should not be isolated promotional activities but embedded components of a broader strategy to deliver meaningful, student-centered experiences(Saragih, 2025).

The synthesis of literature identifies several recurring attributes that strongly influence student satisfaction in higher education. These include responsiveness, accessibility, personalization, reliability, and emotional engagement. Responsiveness refers to how quickly institutions address student inquiries and resolve issues, while accessibility encompasses the ease of navigating academic systems and digital platforms. Personalization emerges as a central factor, where tailored communication and support significantly enhance the perceived value of services. Reliability relates to the consistency of service quality, ensuring that institutional promises are

delivered without deviation. Emotional engagement, often facilitated through digital storytelling or interactive content, strengthens students' sense of belonging and institutional pride. The convergence of these attributes across various studies highlights that student satisfaction is a multidimensional construct shaped by both cognitive and emotional experiences within the academic ecosystem. Thus, any institutional strategy aiming to optimize satisfaction must simultaneously address technological efficiency and emotional resonance(Nwabekee et al., 2025).

Despite the benefits highlighted, the reviewed literature also identifies several challenges that hinder the optimization of digital marketing and service quality. One major issue concerns institutional resistance to digital transformation, often due to limited technological literacy or rigid administrative structures. Another challenge lies in data management, as universities may collect vast amounts of information but lack the analytical capacity to convert it into actionable insights. Additionally, inconsistencies between marketing promises and actual service delivery create credibility gaps that negatively impact student satisfaction. The literature also points out that not all institutions allocate sufficient resources for staff training or digital infrastructure, resulting in uneven implementation of technology-driven strategies. Furthermore, cultural and demographic diversity among students complicates the design of universally effective marketing and service models. Addressing these challenges requires a shift toward evidence-based decision-making, continuous professional development, and institutional cultures that value innovation and adaptability.

Overall, the literature synthesis reveals that optimizing digital marketing strategies and academic service quality through the KANO Model framework provides a comprehensive pathway for improving student satisfaction. The findings suggest that universities must strategically combine data analytics, service innovation, and digital engagement to meet and exceed student expectations. The integration of these elements not only enhances institutional competitiveness but also fosters a sense of trust and belonging among students. Importantly, the results underscore that student satisfaction is not a static outcome but a dynamic construct influenced by evolving digital trends, service performance, and experiential quality. Therefore, universities should continuously monitor shifts in student expectations and adjust their marketing and service strategies accordingly. The combined application of digital marketing and the KANO-based understanding of service attributes represents a sustainable model for achieving long-term academic excellence and student-centered institutional development(Song et al., 2025).

Discussion

Interpretation of Findings and Theoretical Alignment

The findings of this research align with and extend several established theoretical perspectives within marketing and service quality frameworks. By integrating Digital Marketing Theory, the Service Quality (SERVQUAL) model, and the KANO Model, this study develops a comprehensive approach to understanding student satisfaction in higher education institutions. Traditional theories often treat marketing and service quality as separate domains—marketing as the process of attracting students and service quality as the effort to retain them. However, this research reveals that the two interact dynamically, forming a synergistic system that shapes both perception and behavior. When institutions effectively merge digital engagement strategies with consistent academic service delivery, they create a seamless student experience that satisfies both cognitive and emotional dimensions. This theoretical synthesis thus underscores the necessity of approaching student satisfaction as a multidimensional construct influenced by interrelated marketing and service mechanisms rather than as isolated operational outcomes(Lusianti et al., 2024).

From a functional standpoint, digital marketing serves as a critical enabler of accessibility, visibility, and interaction in the educational ecosystem. The use of data-driven content, personalized communication, and targeted campaigns allows institutions to reach potential students while maintaining relationships with current ones. Such practices reflect the core tenets of Digital Marketing Theory, which emphasize customer orientation, real-time responsiveness, and engagement continuity. In the higher education context, digital marketing transcends mere promotion—it shapes how students encounter, evaluate, and internalize institutional identity. It functions as a bridge that connects institutional values with students' academic aspirations through various digital touchpoints such as websites, social media, and learning management systems. When designed effectively, these digital engagements enhance transparency, reduce informational barriers, and foster trust in institutional credibility. Thus, functionally, digital marketing represents the foundation upon which perception and satisfaction are initially constructed within modern educational environments(Gunistiyo et al., 2025).

Emotionally, student satisfaction is profoundly influenced by the perceived quality of interactions and the relational depth of academic services. The SERVQUAL model proposed by Parasuraman, Zeithaml, and Berry (1988) identifies five dimensions—tangibility, reliability, responsiveness, assurance, and empathy—as determinants of service quality. Within higher

education, these elements extend beyond transactional services into affective and cognitive experiences that define a student's sense of belonging. When institutions provide timely responses, empathetic communication, and reliable academic support, students perceive the institution as caring and competent. This emotional reinforcement builds psychological comfort and loyalty, complementing the functional benefits of digital marketing. The findings of this study confirm that when emotional and relational quality coexists with efficient service processes, overall satisfaction is greatly amplified. Therefore, service quality is not merely a background process but an emotional infrastructure sustaining long-term institutional reputation and student commitment.

The integration of the KANO Model further deepens the understanding of how satisfaction drivers operate within educational settings. Developed by Noriaki Kano in the 1980s, the model categorizes product or service attributes into three primary groups: must-be (basic expectations), one-dimensional (performance-related), and delighter (innovative or unexpected satisfiers). Applied to higher education, this framework enables institutions to differentiate between fundamental academic obligations—such as curriculum quality or administrative responsiveness—and innovative value drivers like personalized digital platforms, student wellness programs, or real-time academic support. By identifying which attributes evoke delight rather than mere satisfaction, universities can prioritize innovation in areas that significantly enhance student experiences. The KANO Model therefore provides a strategic lens through which decision-makers can allocate resources efficiently and design service improvements that align with evolving student expectations in the digital era(Kusumawati et al., 2025).

The Role of Digital Marketing in Enhancing Student Experience

Digital marketing in higher education extends well beyond the boundaries of recruitment; it fundamentally redefines how students perceive, engage with, and interpret the institutional brand throughout their academic journey. As higher education becomes increasingly digitized, the university's online presence serves as both a communication platform and a reflection of institutional culture. Studies consistently highlight that interactive, transparent, and personalized digital communication fosters a stronger sense of belonging and emotional connection between students and their universities. When institutions actively utilize social media to share authentic success stories, promote campus events, and engage in two-way dialogue, they cultivate an inclusive digital community that mirrors the participatory nature of modern learning. This form of engagement not only enhances satisfaction but also contributes to long-term retention by

reinforcing the perception that the institution values students' voices and experiences. Thus, digital marketing evolves from a transactional recruitment tool into a relational engagement strategy central to institutional identity and student loyalty.

Table 1. The Strategic Role of Digital Marketing in Shaping Student Experience and Institutional Identity.

Dimension	Strategic Focus	Digital Marketing Initiatives	Psychological Impact on Students	Expected Institutional Outcomes
Institutional Branding & Identity	Position digital presence as a reflection of academic culture and values.	• Develop cohesive online branding across platforms. • Showcase academic excellence and innovation through storytelling. • Highlight diversity and inclusivity.	Builds trust, admiration, and emotional alignment with institutional identity.	Stronger brand credibility and global visibility.
Interactive Communication	Foster two-way digital dialogue to enhance engagement and transparency.	• Utilize social media for Q&A sessions, feedback collection, and live campus events. • Encourage student-generated content. • Maintain open comment and discussion channels.	Increases perceived openness, involvement, and sense of belonging.	Enhanced community engagement and retention.
Personalization & Relationship Marketing	Create personalized student experiences through digital tools and analytics.	• Implement AI-based chatbots, tailored newsletters, and adaptive web content. • Track student preferences for customized interaction.	Fosters a sense of being understood and valued as an individual.	Improved satisfaction, loyalty, and long-term connection with the institution.
Authentic Storytelling	Use genuine success narratives to humanize the digital brand.	• Share alumni achievements, student testimonials, and faculty research highlights. • Integrate visual and emotional storytelling formats.	Evokes pride, inspiration, and emotional engagement with the university community.	Increased trust, advocacy, and positive word-of-mouth.
Community Building through Digital Ecosystems	Transform online presence into an inclusive learning and social environment.	• Develop online clubs, digital forums, and virtual open houses. • Promote cross-cultural interaction and collaboration.	Strengthens belonging, participation, and peer-to-peer support.	Greater student retention and institutional loyalty.

The implementation of data-driven personalization represents a major advancement in the integration of digital marketing and service quality. Adaptive communication tools—such as algorithm-based email campaigns, AI-powered chatbots, and predictive analytics—enable institutions to provide timely and context-specific responses to individual student needs. This responsiveness directly reflects the "responsiveness" and "empathy" dimensions of the SERVQUAL model introduced by Parasuraman, Zeithaml, and Berry (1988), which emphasize the emotional and relational components of service quality. By tailoring digital interactions based on behavioral data, institutions demonstrate attentiveness and care, transforming students from passive recipients of information into active participants in the learning process. Such personalization enhances satisfaction because it delivers convenience, relevance, and immediacy—key elements in the digital experience economy. Furthermore, the integration of these technologies strengthens perceived institutional reliability and approachability, leading to increased trust and deeper engagement. Therefore, personalization in digital marketing is not merely a technical innovation; it is a strategic expression of empathy that bridges service excellence with emotional resonance.

Despite its transformative potential, the effectiveness of digital marketing in higher education depends largely on the alignment between digital promises and the actual academic experience. When online narratives exaggerate institutional strengths or fail to reflect the real quality of academic services, the resulting inconsistency breeds disappointment and erodes trust. This study highlights that digital marketing should not be viewed as an isolated operational function but as an integrated component of the institution's quality assurance and academic delivery systems. Strategic coherence between marketing communication and academic reality ensures that student expectations are accurately managed and continuously fulfilled. Moreover, digital marketing teams must collaborate closely with academic and administrative units to ensure message authenticity, transparency, and alignment with institutional values. Such coordination fosters a culture of integrity and strengthens the university's brand reputation in the competitive digital landscape. Ultimately, the optimization of digital marketing becomes a cyclical process of engagement, feedback, and improvement—reinforcing the conclusion that authentic, value-driven communication is central to sustaining student satisfaction and institutional credibility in the digital era.

Academic Service Quality as a Determinant of Institutional Trust

Academic service quality remains one of the most decisive determinants of student trust, satisfaction, and loyalty in higher education. It reflects the degree to which an institution's administrative and academic processes meet or exceed students' expectations. The findings of this study indicate that students often interpret the quality of service delivery—ranging from academic advising to administrative assistance—as a direct indicator of institutional competence and care. When university systems such as registration portals, learning management platforms, and assessment feedback mechanisms operate efficiently, students perceive the institution as credible, responsive, and student-oriented. This perception significantly influences their overall satisfaction and willingness to recommend the institution to others. Hence, academic service quality is not merely an operational metric but a relational construct that shapes long-term institutional reputation, acting as the visible expression of internal quality culture and organizational commitment to excellence.

According to the SERVQUAL model developed by Parasuraman, Zeithaml, and Berry (1988), two primary dimensions—reliability and assurance—serve as the foundation of trust in service interactions. Reliability refers to the institution's ability to deliver promised services dependably and accurately, while assurance relates to the confidence and competence conveyed by staff in their interactions with students. In the academic context, reliability manifests in the seamless operation of administrative systems, accurate academic records, and timely resolution of student concerns. Assurance, meanwhile, emerges from staff professionalism, transparency in academic policies, and consistent communication regarding institutional procedures. The findings reinforce that when students perceive reliability and assurance in academic services, they develop a heightened sense of institutional trust. This trust forms the psychological bridge between students' expectations and their lived experiences, ensuring that satisfaction is both rationally and emotionally sustained throughout their educational journey.

Beyond functionality, academic service quality also encompasses profound emotional components that significantly shape student experiences. Empathy, fairness, and emotional support from academic and administrative staff contribute directly to a student's sense of belonging and institutional attachment. Interpersonal warmth during service interactions—such as understanding student challenges, providing guidance, or offering encouragement—creates emotional reassurance that the institution genuinely cares for its learners. These affective dimensions correspond with the "empathy" and "responsiveness" constructs in the SERVQUAL framework, emphasizing that emotional engagement is as crucial as procedural efficiency. The

literature consistently highlights that when students feel respected, heard, and valued, their satisfaction transcends transactional boundaries, evolving into loyalty and advocacy. Therefore, fostering a culture of empathy within academic services is a strategic imperative for higher education institutions seeking to humanize digital processes and maintain meaningful connections in an increasingly automated environment.

The improvement of academic service quality carries profound strategic implications for institutional sustainability and competitiveness. Effective service delivery not only enhances satisfaction but also serves as a safeguard against dissatisfaction when marketing expectations are elevated. Even when service failures occur, timely and transparent recovery mechanisms—such as responsive complaint handling and corrective communication—can mitigate negative perceptions and rebuild trust. This finding underscores that service quality management is not simply a technical or administrative responsibility; it represents a strategic function linking marketing communication with experiential reality. Institutions that consistently align their promises with actual service performance strengthen their credibility, thereby sustaining brand equity and student retention. Moreover, high academic service quality contributes to institutional differentiation in a saturated educational market, positioning the university as both trustworthy and learner-centered. Ultimately, maintaining academic service excellence ensures that the student's educational journey remains efficient, supportive, and fulfilling—an outcome central to long-term institutional success.

Implications of the KANO Model for Service and Marketing Innovation

The application of the KANO Model in this research provides profound insights into how higher education institutions can strategically prioritize their service and marketing innovations based on differentiated levels of student expectations. Originally developed by Noriaki Kano in the 1980s to analyze customer satisfaction in product design, the model has since evolved into a powerful diagnostic tool for service quality management across various sectors, including education. Its strength lies in the ability to distinguish between attributes that merely prevent dissatisfaction and those that actively generate delight. Within the academic context, this distinction becomes essential as universities increasingly operate in competitive digital environments where student satisfaction and loyalty directly influence institutional reputation. By adopting the KANO framework, institutions can systematically identify which aspects of their services are fundamental requirements and which represent opportunities for differentiation and innovation. This prioritization ensures that limited institutional resources are allocated

efficiently to initiatives that yield the greatest impact on satisfaction and retention.

The first category in the KANO Model, the must-be attributes, represents the basic expectations that students assume will be inherently provided by any credible educational institution. These include accurate academic information, transparent communication, timely administrative responses, and reliable academic services such as course registration and grading systems. When these attributes are absent or poorly executed, dissatisfaction quickly arises, regardless of the institution's other strengths. However, their presence alone does not necessarily generate satisfaction—they simply prevent dissatisfaction. The findings of this study reaffirm that these foundational attributes form the structural backbone of institutional credibility. For universities, maintaining high standards in must-be attributes requires consistent quality control, technology reliability, and accountability mechanisms. Neglecting these essentials can damage institutional trust and overshadow more innovative efforts. Therefore, effective management of must-be factors serves as the baseline for building student confidence and ensures that higher-order satisfaction drivers can operate effectively.

The one-dimensional attributes within the KANO Model correspond to institutional features whose performance level directly correlates with student satisfaction. In higher education, these may include flexible learning modalities, responsive online platforms, efficient academic advising systems, and user-friendly digital interfaces. When such features perform well, satisfaction rises proportionally; when performance declines, dissatisfaction increases. The research findings highlight that these attributes often represent the main competitive battleground among universities, as they reflect the institution's ability to deliver functional value efficiently and consistently. Investments in optimizing one-dimensional factors—such as enhancing e-learning technologies or simplifying administrative workflows—can yield significant gains in student satisfaction and retention. However, the challenge lies in maintaining a balance between technological sophistication and human interaction, ensuring that efficiency does not compromise empathy. As a result, managing one-dimensional attributes demands a continuous improvement mindset rooted in responsiveness and adaptive service design, reflecting both technological and emotional aspects of student experience.

The most strategic opportunity identified through the KANO Model lies within the attractive attributes, often termed "delighters," which exceed student expectations and evoke strong positive emotions. In the university context, these attributes include innovative initiatives such as personalized mentoring programs, digital innovation labs, immersive virtual campus tours, or gamified learning platforms. Although their absence does not cause dissatisfaction, their

presence significantly elevates the perception of institutional excellence. The findings suggest that attractive attributes have the highest marginal impact on satisfaction, as they introduce novelty, personalization, and emotional resonance into the student experience. Furthermore, these attributes act as differentiators in competitive markets, strengthening brand identity and student loyalty. Literature supports that institutions investing in attractive features tend to achieve stronger engagement, positive word-of-mouth, and enhanced reputation capital. Therefore, universities should view the cultivation of attractive attributes as an innovation strategy rather than a luxury, ensuring that delight-driven experiences become a defining element of institutional value propositions.

Beyond service design, the KANO framework also provides critical guidance for marketing communication and institutional strategy. By identifying which attributes fall into must-be, one-dimensional, and attractive categories, universities can tailor their marketing messages to reflect authentic strengths while managing expectations realistically. Highlighting attractive attributes in promotional campaigns—such as personalized academic support or cutting-edge digital resources—helps differentiate the institution without overpromising. At the same time, maintaining excellence in must-be and one-dimensional areas ensures that marketing messages remain credible and supported by consistent academic delivery. This alignment between communication and experience minimizes cognitive dissonance, fostering trust and reinforcing long-term satisfaction. Strategically, the KANO Model encourages institutions to adopt a cyclical process of evaluation, feedback, and innovation, ensuring that evolving student expectations are continually met or exceeded. Ultimately, integrating the KANO approach allows universities to synchronize marketing, service quality, and innovation—transforming satisfaction management from a reactive process into a proactive, data-informed strategy that sustains competitive advantage in the digital era.

Challenges and Limitations in Implementing Findings

While the findings offer a robust conceptual framework, several challenges may arise in practical implementation. The most critical issue involves the resource disparity among higher education institutions, particularly in developing countries where digital infrastructure and marketing expertise remain limited. Furthermore, the Narrative Literature Review method inherently allows a degree of researcher subjectivity, which may influence interpretation and synthesis of findings. The reviewed studies also reveal that institutional silos—between marketing departments and academic management—often impede integrated strategy execution. Another limitation is the

rapid evolution of digital technologies, which can render existing strategies obsolete if not continuously adapted. Additionally, cultural diversity and student heterogeneity complicate the creation of standardized satisfaction models across different educational contexts. Therefore, while the framework proposed in this study is conceptually strong, its practical adoption requires institutional flexibility, sustained investment, and periodic reassessment to ensure relevance and effectiveness in dynamic educational environments.

Strategic and Practical Implications for Higher Education

The overall discussion emphasizes that universities aiming to enhance student satisfaction must adopt a dual strategic approach: optimizing digital marketing performance and continuously improving academic service quality under the guidance of the KANO Model. This duality reflects the intertwined nature of perception and experience in modern higher education. While digital marketing shapes the external narrative that attracts and engages prospective students, academic service quality determines whether those expectations are fulfilled and sustained throughout the learning journey. The findings of this research reveal that institutions that effectively integrate these two dimensions tend to build stronger student loyalty and institutional credibility. The KANO framework adds a structured layer to this process by helping universities identify which aspects of their marketing and service design must be maintained, improved, or innovated to meet dynamic student expectations. Thus, the pursuit of satisfaction is not a single initiative but an ongoing institutional philosophy that connects marketing, service delivery, and innovation into one cohesive ecosystem.

Strategically, the findings advocate for the establishment of integrated marketing and academic service units that share real-time data insights and align their operational objectives. Such integration ensures that the messages communicated through digital marketing campaigns accurately reflect the quality and values experienced by students on campus or online platforms. Shared analytics and cross-functional collaboration enable a feedback-driven culture where institutional decisions are guided by actual student behaviors and preferences. Data synchronization between marketing and service departments helps identify inconsistencies, optimize engagement strategies, and reduce the risk of expectation gaps. Furthermore, this alignment enhances institutional transparency and accountability, as both divisions work toward common goals centered on student satisfaction and trust. In essence, the integration of marketing and service functions transforms higher education institutions from fragmented bureaucracies into cohesive, student-oriented organizations capable of adapting swiftly to external and internal

demands.

Practically, universities must complement strategic alignment with tangible investments in digital literacy, infrastructure, and real-time feedback mechanisms. Digital literacy training for academic and administrative staff is crucial to ensure that technological tools are not merely implemented but effectively utilized to enhance student engagement and service efficiency. Responsive online platforms—such as mobile-friendly learning management systems, interactive dashboards, and AI-based chat assistants—serve as critical touchpoints that embody institutional accessibility and reliability. Equally important is the implementation of satisfaction monitoring systems capable of capturing and analyzing student feedback continuously, enabling timely service adjustments and problem resolution. These practices echo the responsiveness and empathy dimensions of the SERVQUAL model, reinforcing the institution's humanized approach to digital transformation. By investing in capacity building and digital infrastructure, universities not only improve operational efficiency but also demonstrate a proactive commitment to understanding and serving their students' evolving needs.

Embedding the KANO-based approach within academic service and digital marketing design empowers institutions to anticipate and adapt to changing student expectations more effectively. The model's classification of attributes into must-be, one-dimensional, and attractive categories provides a roadmap for prioritizing innovation based on satisfaction impact. By regularly assessing which attributes shift across these categories over time, universities can remain agile in a dynamic educational landscape. For instance, digital responsiveness that once delighted students may eventually become an expected standard, necessitating new forms of innovation such as immersive virtual experiences or AI-driven mentoring. The KANO framework thus institutionalizes a cycle of reflective improvement, transforming student satisfaction management into a continuous learning process rather than a one-time initiative. This adaptive strategy ensures that institutional offerings evolve in tandem with technological progress and generational shifts in student behavior, keeping universities relevant and competitive in the global education marketplace.

The long-term implication of this integrated strategy is the creation of a sustainable, student-centered ecosystem that reinforces both recruitment and retention through authenticity, innovation, and empathy. When digital marketing and academic services are harmonized under a KANO-informed framework, universities move beyond transactional interactions toward relational engagement built on trust and shared value. This transformation humanizes digital education by ensuring that every technological advancement serves a meaningful pedagogical

and emotional purpose. Furthermore, it aligns with contemporary demands for educational experiences that are not only efficient but also inclusive, personalized, and socially responsive. Ultimately, universities that operationalize this integration will redefine student satisfaction as a dynamic partnership rather than a passive outcome. In doing so, they position themselves as adaptive learning communities capable of thriving in the evolving 21st-century education ecosystem—where success is measured not only by enrollment numbers but by sustained student fulfillment and institutional resilience.

Table 2. Integrated Framework for Enhancing Student Satisfaction through Digital Marketing, Service Quality, and KANO Model

Dimension	Strategic Focus	Key Actions / Initiatives	KANO Attribute Category	Expected Outcome
Digital Marketing Optimization	Strengthen institutional visibility and engagement through data-driven communication.	• Develop personalized campaigns using AI and analytics. • Align online branding with institutional values. • Maintain consistency between promotional content and academic realities.	*One-Dimensional*	Increased engagement, trust, and recruitment effectiveness.
Academic Service Quality Enhancement	Ensure operational excellence and emotional connection in service delivery.	• Improve responsiveness of administrative processes. • Enhance advising and support services. • Implement transparent feedback and recovery mechanisms.	*Must-Be*	Greater reliability, assurance, and long-term satisfaction.
Organizational Integration	Align marketing and service departments for shared goals and performance metrics.	• Establish integrated data systems. • Conduct cross-departmental coordination meetings. • Utilize shared analytics dashboards.	*One-Dimensional → Attractive*	Consistency between communication and experience; reduced expectation gaps.
Digital Literacy & Infrastructure Development	Empower staff and systems for responsive, high-quality service interactions.	• Provide digital literacy training. • Upgrade online platforms and LMS interfaces. • Deploy real-time	*One-Dimensional*	Improved service efficiency and responsiveness; stronger empathy perception.

Dimension	Strategic Focus	Key Actions / Initiatives	KANO Attribute Category	Expected Outcome
		satisfaction monitoring tools.		
KANO-Guided Innovation	Prioritize innovations based on satisfaction impact and expectation level.	• Identify shifting student expectations. • Introduce interactive learning tools and virtual campus experiences. • Personalize student engagement pathways.	*Attractive*	Enhanced delight, loyalty, and institutional differentiation.
Sustainable Student-Centered Ecosystem	Embed authenticity and empathy into all institutional functions.	• Integrate KANO-based service design. • Promote continuous improvement culture. • Align digital transformation with pedagogical goals.	*Dynamic Integration of All Categories*	Sustainable satisfaction, retention, and reputation growth.

CONCLUSIONS

Unexpectedly, this study reveals that the optimization of digital marketing strategies and academic service quality, when analyzed through the lens of the KANO Model, produces a synergistic effect that goes far beyond conventional expectations of student satisfaction. Contrary to the traditional belief that marketing efforts and service quality operate as separate dimensions, this research uncovers that their intersection forms a dynamic satisfaction ecosystem where each element reinforces the other. The surprising finding is that students respond more positively when digital marketing not only attracts them with persuasive content but also mirrors the reliability and empathy found in academic services. This alignment between marketing promises and service delivery builds emotional trust, transforming satisfaction into loyalty. The KANO Model, by categorizing institutional attributes into "must-be," "one-dimensional," and "delighter" factors, demonstrates that emotional and experiential dimensions play a larger role in satisfaction than previously recognized. Thus, student satisfaction is not merely an outcome of academic excellence or digital presence—it is an emergent property of coherent, value-driven engagement across all institutional touchpoints.

Theoretically, this research contributes a novel framework that bridges marketing science and educational service management through the KANO Model, providing a multidimensional approach to understanding student satisfaction. It expands the theoretical boundaries of the

KANO Model by adapting it from consumer product satisfaction to the academic context, thus proving its versatility as a diagnostic and strategic tool in higher education. Practically, the study provides actionable insights for universities to improve their competitiveness in the digital era. It highlights that optimizing digital marketing strategies must be accompanied by the consistent enhancement of academic services to sustain satisfaction and trust. The research encourages institutional leaders to adopt a data-driven and student-centered mindset, using satisfaction analysis as both a strategic compass and a quality assurance mechanism. Furthermore, by connecting theoretical constructs with real-world implementation, this study establishes a foundation for policy formulation and institutional reform aimed at elevating the quality and sustainability of higher education.

Although this research successfully integrates digital marketing and academic service quality using a narrative literature review approach, it acknowledges certain inherent limitations that open opportunities for future exploration. The qualitative and interpretive nature of the narrative review means that the findings rely on secondary data synthesis rather than empirical measurement, which may introduce subjectivity and contextual bias. However, this should not be seen as a weakness but rather as an invitation for future researchers to empirically validate and expand upon these findings using mixed-methods or longitudinal approaches. Future studies could apply quantitative models to measure the causal relationships between digital marketing variables, service quality dimensions, and satisfaction outcomes across different cultural or institutional contexts. Moreover, integrating emerging frameworks such as *Learning Analytics*, *Customer Experience Management*, and *Artificial Intelligence in Education* could enrich the understanding of how digital interactions shape student satisfaction over time. Thus, this study lays the conceptual groundwork for a new generation of research that merges technology, service design, and emotional engagement in higher education.

References:

[1]   Al-Makssoossi, A. M. M. (2022). *Developing an integrated Kano-QFD-SWOT approach to recommend prioritised institutional requirements based on social and academic expectations of Arabic international students at three Queensland universities*. University of Southern Queensland.

[2]   Arafat, M. (2024). Enhancing Learning Management Systems (LMS) Through Kano Analysis. *Acta Prosperitatis*, *15*(1).

[3]   Buffon, C. Z. (2025). *Determining Essential Attributes for Experience and Satisfaction in the Customer 4.0 Era: a Kano Model Approach*.

[4]   Chen, J.-L., & Zheng, L.-N. (2023). The satisfaction of the undergraduate nursing

classroom teaching quality based on the Kano model in China. *SAGE Open Medicine*, *11*, 20503121231157210.

[5]   Dutt, A., Kasilingam, D., Angell, R., & Singh, J. (2024). The future of marketing and communications in a digital era: data, analytics and narratives. *Journal of Strategic Marketing*, *32*(8), 1435–1443.

[6]   Gunistiyo, G., Rosyalita, D., Ginanjar, F., & Fahreza, M. R. (2025). The Role of Green Marketing in Enhancing Brand Image and Consumer Preferences for Eco-Friendly Products. *The Journal of Academic Science*, *2*(8), 1961–1968.

[7]   Kusumawati, R., Agustian, M. F. Y., & Rosyalita, D. (2025). EXPLORING THE ECONOMIC LINK BETWEEN FINANCIAL RISK STRATEGIES AND LONG-TERM SUSTAINABILITY IN THE BANKING INDUSTRY. *SIBATIK JOURNAL: Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, Dan Pendidikan*, *4*(10), 3169–3178.

[8]   Liu, J., Kamarudin, K. M., & Zou, J. (2021). Integrating Kano Model With Rough Set Theory To Determine Users' Needs: Improving Service Quality in Academic Libraries in China. *Alam Cipta*, *14*(1), 20–30.

[9]   Lusianti, D., Widodo, W., & Mulyana, M. (2024). Mas' uliyah Society Brand Resonance: Enhancing Sustainable Marketing Performance of the National Health Insurance Program. *Qubahan Academic Journal*, *4*(3), 619–637.

[10]   Masnar, H. M., & Namoco, C. S. (2024). Applying the Kano Model to Explore Students' Service Quality Requirements in a Philippine State-Owned University. *Journal of Harbin Engineering University*, *45*(8), 22–29.

[11]   Nwabekee, U. S., Okpeke, F., & Onalaja, A. E. (2025). Technology in operations: A systematic review of its role in enhancing efficiency and customer satisfaction. *Unpublished Manuscript*.

[12]   Ömürgönülşen, M., Eryiğit, C., Tektaş, Ö. Ö., & Soysal, M. (2020). Enhancing the quality of a higher education course: quality function deployment and Kano model integration. *Yükseköğretim Dergisi*, *10*(3), 312–327.

[13]   Rakhmadi, E., Muhaimin, M., & Cinantiya, C. (2026). The The Application Of The Kano Model In Enhancing Digital Learning Satisfaction: A Total Quality Management Perspective. *IJGIE (International Journal of Graduate of Islamic Education)*, *7*(1), 27–40.

[14]   Saragih, H. (2025). The role of digital transformation in enhancing performance and security of technology infrastructure in public institutions. *Edelweiss Applied Science and Technology*, *9*(6), 679–686.

[15]   Shemshaki, M. (2024). *Data-Driven Digital Marketing The Art and Science of Intelligent Decision-Making*. Milad Shemshaki.

[16]   Song, Y., Qiu, X., & Liu, J. (2025). The impact of artificial intelligence adoption on organizational decision-making: An empirical study based on the technology acceptance model in business management. *Systems*, *13*(8), 683.

[17]   Sugiharto, B., Harkim, H., Hiya, N., Simanungkalit, R. V., & Andriani, M. (2025). Harnessing digital intelligence: enhancing effectiveness in digital marketing. *Golden Ratio of Marketing and Applied Psychology of Business*, *5*(1), 53–65.

[18]   Umano, M., Cudney, E. A., Buffon, C. Z., Furterer, S., & Elshennawy, A. (2024). *Course gamification: Applying the KANO model to gather student perceptions*