

The Effect of Viral Marketing Strategy, Service Quality, and Trust Level on Purchase Decisions of Sports Service Business Units at Yogyakarta State University



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ABSTRACT: This study investigates the integration of viral marketing strategies and service quality in university sports facilities, examining their impact on purchase decisions through user trust as a mediating variable. The research addresses the growing need for financial independence in state universities, particularly focusing on sports service units at Yogyakarta State University (UNY). Using a quantitative approach, data were collected from 384 respondents through structured questionnaires, analyzing responses using Partial Least Squares Structural Equation Modeling (PLS-SEM). Results reveal significant positive relationships between viral marketing and user trust ($\beta=0.328$, $p<0.001$), and both factors' influence on purchase decisions ($\beta=0.318$ and $\beta=0.229$ respectively, $p<0.001$). The study confirms user trust's mediating role in both relationships (indirect effects: $\beta=0.074$ and $\beta=0.081$, $p<0.001$). These findings contribute to digital marketing and service management literature while providing practical implications for higher education institutions seeking to optimize revenue through sports facilities. The developed framework offers a comprehensive approach to integrating digital marketing strategies with service quality improvements, emphasizing the crucial role of user trust in driving purchase decisions.

KEYWORDS: viral marketing, service quality, user trust, purchase decisions, sports facilities, higher education

I. INTRODUCTION

A. Background

The transformation of state universities into Legal Entity Status (PTNBH - Perguruan Tinggi Negeri Berbadan Hukum) represents a significant shift in Indonesia's higher education landscape. This transition, exemplified by Yogyakarta State University (UNY), marks a crucial evolution in institutional governance and financial management. The PTNBH status grants universities greater autonomy in their operations while simultaneously requiring them to achieve financial independence, creating both opportunities and challenges in resource management and revenue generation (Oktaviana, 2024; Soewarno & Isnalita, 2019). This transformation occurs against the backdrop of declining government funding and increasing operational costs in higher education. Universities must now develop sustainable revenue streams beyond traditional sources such as tuition fees and government allocations. The challenge of financial independence is particularly pressing, as institutions must maintain academic excellence while developing entrepreneurial capabilities to support their operations (Athapaththu & Kulathunga, 2018; Rahayu & Kusumawati, 2023).

Sports facilities within universities represent a significant yet often underutilized asset for revenue generation. These facilities, including swimming pools, fitness centers, sports halls, and stadiums, possess substantial potential for commercialization while serving both academic and public needs. However, the effective monetization of these facilities requires a sophisticated understanding of modern marketing strategies and service quality management (Boentoro & Paramita, 2019; Suryadi et al., 2021).

The digital transformation of marketing practices, particularly through viral marketing and social media engagement, offers new opportunities for promoting university sports facilities. Recent studies indicate that 72% of Indonesian internet users actively engage with social media platforms, presenting a valuable channel for reaching potential users (AJPII, 2024). However, the success of digital marketing initiatives depends heavily on service quality and user trust, especially in the competitive sports service sector. The convergence of these factors - institutional transformation, financial independence requirements, and the potential of sports facilities - creates a complex ecosystem requiring innovative approaches to revenue

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generation. This research focuses on understanding how the integration of viral marketing strategies with enhanced service quality can drive purchase decisions through the building of user trust, ultimately contributing to the financial sustainability of university sports facilities.

B. Research Gap

Despite the growing importance of digital marketing and service quality in sports facility management, current literature reveals several significant gaps in understanding their integrated effects on purchase decisions. While viral marketing and service quality have been studied separately in various contexts, there is limited research examining their combined impact, particularly in the unique setting of university sports facilities (Liu & Wang, 2019; Martinez & Wong, 2023). This integration gap is particularly notable given the increasing reliance on digital platforms for service promotion and delivery.

The role of trust as a mediating factor in sports service marketing remains understudied, especially in the context of higher education institutions. While trust has been recognized as crucial in online marketing (Kim & Kim, 2023) and service quality perception (Lee & Kim, 2022), there is a notable absence of comprehensive frameworks that explain how trust mediates the relationship between marketing strategies, service quality, and purchase decisions in sports services. This gap is particularly relevant as universities seek to build long term relationships with both internal and external stakeholders. Furthermore, empirical studies specifically addressing the challenges of university sports facilities in developing economies are scarce. Most existing research focuses on commercial sports facilities or developed market contexts, leaving a significant knowledge gap in understanding how state universities in transitioning economies can effectively leverage their sports facilities for revenue generation (Widodo & Raharja, 2021; Wulandari & Hartono, 2023). This gap is particularly critical for institutions undergoing transformation to legal entity status, where financial independence is a key objective.

The intersection of these gaps presents a unique opportunity to develop an integrated framework that addresses the complex relationships between viral marketing, service quality, and user trust in driving purchase decisions for university sports services. Such a framework would not only contribute to theoretical understanding but also provide practical guidance for universities seeking to optimize their sports facility operations.

C. Research Objectives

Building upon the identified research gaps, this study pursues four interconnected objectives that collectively aim to advance both theoretical understanding and practical applications in sports service marketing within higher education institutions.

The first objective is to analyze the influence of viral marketing strategies on purchase decisions in university sports facilities. This analysis examines how different elements of viral marketing campaigns, including content appeal, platform selection, and message virality, impact users' decisions to purchase sports services.

The investigation considers both direct effects and the contextual factors that moderate these relationships, providing insights into the effectiveness of digital marketing approaches in the university sports sector (Kaplan & Haenlein, 2011; Kim & Ko, 2012).

The second objective focuses on examining the impact of service quality on user trust in the context of university sports facilities. This examination encompasses multiple dimensions of service quality, including tangibility, reliability, responsiveness, assurance, and empathy, as outlined in the SERVQUAL model (Parasuraman et al., 2018). The study investigates how these dimensions contribute to building and maintaining user trust in an educational institution's sports services.

The third objective investigates the mediating role of user trust in the relationship between marketing strategies, service quality, and purchase decisions. This investigation is crucial for understanding how trust functions as a psychological mechanism that transforms marketing efforts and service quality improvements into actual purchase behaviors. The analysis employs sophisticated statistical techniques to decompose direct and indirect effects, providing a nuanced understanding of trust's mediating role (Morgan & Hunt, 1994; Chen et al., 2024).

The fourth objective aims to develop an integrated framework that synthesizes viral marketing, service quality, and trust elements into a comprehensive model for enhancing purchase decisions in university sports facilities. This framework will serve both theoretical and practical purposes, offering academics a structured approach for future research while providing practitioners with actionable guidelines for improving sports facility performance. The framework will be validated through empirical testing and refined based on the study's findings.

II. LITERATURE REVIEW

A. Theoretical Foundation

1. Viral Marketing Theory

The concept of viral marketing has evolved significantly since its inception, moving from simple word-of-mouth propagation to sophisticated digital strategies. Kaplan and Haenlein (2011) define viral marketing as electronic word-of-mouth whereby marketing messages related to a company, brand, or product are transmitted in an exponentially growing way using social media platforms. This theoretical framework emphasizes three essential components: message content, social network structure, and behavioral characteristics of message recipients.

Contemporary viral marketing theory incorporates elements from social contagion models (Berger & Milkman, 2012) and diffusion of innovations theory (Rogers, 2023). The effectiveness of viral content is determined by six key principles: social currency, triggers, emotion, public visibility, practical value, and storytelling (Berger, 2013). In the context of sports services, viral marketing success depends heavily on content authenticity, emotional resonance, and community engagement (Kim & Kim, 2023).

Recent theoretical developments highlight the role of platform-specific characteristics in viral marketing effectiveness. Studies by Wilson et al. (2024) demonstrate that different social media platforms (e.g., Instagram, TikTok, YouTube) require tailored approaches to achieve optimal viral spread. This is particularly relevant for sports facilities, where visual content and community interaction play crucial roles in message transmission.

2. Service Quality Models

Service quality theory has been predominantly shaped by the SERVQUAL model (Parasuraman et al., 2018), which identifies five fundamental dimensions: tangibles, reliability, responsiveness, assurance, and empathy. In 3 / 23 paper.md 2025-03-04 the sports service context, this model has been adapted to incorporate specific elements related to facility management, instructor competence, and program variety (Martinez & Wong, 2023).

The Nordic model of service quality, developed by Grönroos and refined by contemporary researchers, emphasizes the distinction between technical quality (what is delivered) and functional quality (how it is delivered). This distinction is particularly relevant for sports facilities, where both the physical infrastructure and service delivery process significantly impact user satisfaction (Lee & Kim, 2022).

Recent theoretical advances have integrated digital service quality dimensions, acknowledging the growing importance of online interactions in service delivery. The E-S-QUAL framework extends traditional service quality models to include efficiency, system availability, fulfillment, and privacy as critical dimensions in digital service environments (Zeithaml et al., 2023).

3. Trust-Based Marketing Framework

Trust theory in marketing contexts has evolved from simple reliability measures to complex multi-dimensional constructs. Morgan and Hunt's (1994) commitment-trust theory remains foundational, positing that trust and commitment are central to successful relationship marketing. Recent adaptations by Chen et al. (2024) incorporate digital trust elements, particularly relevant for services marketed through social media platforms.

The trust-based marketing framework identifies three primary dimensions: ability (competence), benevolence (goodwill), and integrity (honesty). In sports services, trust development is particularly critical due to the experiential nature of the service and the physical involvement of users. Contemporary research by Haryani and Motwani (2016) and Lee and Kim (2022) emphasizes the role of trust in mediating the relationship between service quality and customer loyalty.

Digital trust frameworks have emerged as essential theoretical components, particularly in viral marketing contexts. These frameworks address issues of online credibility, privacy concerns, and digital reputation management. Recent studies by Pop et al. (2022) highlight the importance of trust signals in social media marketing, including verification badges, user reviews, and transparent communication.

4. Purchase Decision Theory

Purchase decision theory in service contexts integrates elements from behavioral economics, consumer psychology, and marketing science. The classical model by Engel, Blackwell, and Miniard (1995) identifies five stages in the purchase decision process: problem recognition, information search, evaluation of alternatives, purchase decision, and post-purchase behavior. Contemporary research has adapted this model to account for digital influences and social media impacts on decision-making.

Modern purchase decision theory incorporates concepts from prospect theory (Kahneman, 2011) and planned behavior theory (Ajzen, 1991). These theoretical frameworks explain how consumers evaluate options under uncertainty and how social influences affect purchase intentions. In the context of sports services, decision making is particularly influenced by social proof, perceived value, and trust signals (Solomon, 2023).

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Recent theoretical developments emphasize the role of digital touchpoints in the purchase decision journey. Studies by Tran and Strutton (2020) and Liu et al. (2023) highlight how social media interactions, online reviews, and viral content influence service purchase decisions. This is especially relevant for university sports facilities, where potential users often rely on digital information and peer recommendations before making purchase decisions.

B. Conceptual Framework

1. Variable Relationships

Building upon the theoretical foundations discussed above, this study proposes an integrated framework that examines the relationships between viral marketing, service quality, user trust, and purchase decisions in university sports facilities. The framework acknowledges both direct and indirect relationships between these variables, reflecting the complex nature of consumer decision-making in sports services.

The relationship between viral marketing and purchase decisions is theoretically grounded in social contagion theory and digital marketing principles. Previous studies have demonstrated that effective viral marketing can directly influence purchase intentions through increased awareness, emotional engagement, and social proof (Berger & Milkman, 2012; Wilson et al., 2024). In the context of sports facilities, viral content that showcases facility features, user experiences, and community engagement can significantly impact potential users' decision-making processes.

Service quality's relationship with purchase decisions is established through the SERVQUAL framework and Nordic service quality model. Research by Martinez and Wong (2023) indicates that high-quality service delivery in sports facilities positively influences user satisfaction and subsequent purchase behavior. The technical and functional aspects of service quality create value propositions that directly affect users' willingness to engage with sports services.

The mediating role of trust emerges from the integration of commitment-trust theory with modern digital marketing frameworks. Trust serves as a psychological mechanism that transforms marketing efforts and service quality perceptions into concrete purchase decisions. This mediation effect is particularly crucial in sports services, where physical safety and personal investment are significant considerations (Lee & Kim, 2022).

2. Hypothesis Development

Based on these theoretical relationships and empirical evidence from previous studies, the following hypotheses are proposed:

H1: Viral marketing strategies have a positive direct effect on user trust in university sports facilities. Rationale: Drawing from digital trust frameworks and viral marketing theory, effective social media campaigns can build credibility and trustworthiness through consistent, authentic content delivery (Pop et al., 2022).

H2: Service quality has a positive direct effect on user trust in university sports facilities. Rationale: The SERVQUAL dimensions, particularly reliability and assurance, contribute to trust formation through consistent service delivery and professional competence (Parasuraman et al., 2018).

H3: Viral marketing strategies have a positive direct effect on purchase decisions for sports services. Rationale: Social contagion theory and digital marketing research suggest that viral content can trigger purchase behavior through social proof and emotional engagement (Kaplan & Haenlein, 2011).

H4: Service quality has a positive direct effect on purchase decisions for sports services. Rationale: Service quality theory posits that superior service delivery leads to increased customer satisfaction and purchase intention (Zeithaml et al., 2023).

H5: User trust has a positive direct effect on purchase decisions for sports services. Rationale: Trust-based marketing framework suggests that higher levels of trust reduce perceived risk and encourage purchase behavior (Morgan & Hunt, 1994).

H6: User trust mediates the relationship between viral marketing and purchase decisions. Rationale: Digital trust frameworks indicate that marketing effectiveness is enhanced when messages are perceived as trustworthy (Chen et al., 2024).

H7: User trust mediates the relationship between service quality and purchase decisions. Rationale: Service quality research suggests that trust acts as a psychological bridge between service experiences and purchase behavior (Lee & Kim, 2022).

3. Proposed Research Model

The proposed research model (Figure 1) illustrates the hypothesized relationships between variables. The model incorporates both direct effects (H1-H5) and mediation effects (H6-H7), representing a comprehensive framework for understanding purchase decisions in university sports facilities.

[Figure 1: Proposed Research Model]

The model specifically addresses the unique context of university sports facilities by:

- a. Integrating digital marketing elements with traditional service quality measures

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- b. Acknowledging the dual role of trust in online and offline service contexts
- c. Considering the specific characteristics of educational institution services
- d. Incorporating both direct and indirect pathways to purchase decisions

This conceptual framework provides a structured approach for examining how viral marketing and service quality influence purchase decisions through the building of user trust. The framework's comprehensive nature allows for detailed analysis of both direct effects and mediating relationships, contributing to both theoretical understanding and practical applications in sports facility management.

III. METHODOLOGY

A. Research Design

This study employs a quantitative research design to examine the relationships between viral marketing, service quality, user trust, and purchase decisions in university sports facilities. The selection of a quantitative approach is justified by the need to test specific hypotheses and measure the strength of relationships between variables in an objective, systematic manner (Creswell & Creswell, 2018). This approach aligns with similar studies in digital marketing and service quality research, enabling statistical validation of the proposed theoretical framework.

1. Quantitative Approach

The quantitative methodology follows a positivist paradigm, emphasizing objective measurement and statistical analysis of causal relationships between variables. This approach enables:

- a. Systematic testing of the seven hypotheses developed in the conceptual framework
- b. Measurement of direct and indirect effects through structural equation modeling
- c. Statistical validation of the proposed theoretical relationships
- d. Generalizability of findings within the specified context

The research design incorporates both descriptive and inferential statistical analyses to provide a comprehensive understanding of the relationships between variables. This dual approach allows for both detailed characterization of the sample and robust testing of hypothetical relationships (Sekaran & Bougoui, 2016).

2. Cross-sectional Survey

A cross-sectional survey design was chosen to collect data at a single point in time, providing a snapshot of current perceptions and behaviors regarding university sports facilities. This design is appropriate because:

- a. It enables efficient data collection from a large sample
- b. It captures current market conditions and user perceptions
- c. It allows for examination of multiple variables simultaneously
- d. It provides a cost-effective means of gathering comprehensive data

The survey instrument was developed based on validated scales from previous research, adapted to the specific context of university sports facilities. The cross-sectional design also facilitates the examination of relationships between variables without the temporal constraints of longitudinal studies, which is particularly suitable for understanding current purchase decision dynamics.

3. Sampling Strategy

The study employs a stratified random sampling approach to ensure representative coverage of different user groups within the university sports facility ecosystem. The target population includes:

- a. University students (undergraduate and graduate)
- b. Faculty and staff members
- c. Community members using university sports facilities
- d. Corporate clients and organizational users

Sample size determination followed Hair et al.'s (2022) recommendations for PLS-SEM analysis, which suggests a minimum sample size of five times the number of indicators. With 66 measurement indicators in the research instrument, a minimum sample of 330 respondents was required. To account for potential invalid responses and ensure adequate statistical power, the target sample size was increased to 384 respondents.

The sampling frame was stratified based on:

- a. User category (student, staff, community member)
- b. Facility type (swimming pool, fitness center, sports hall, etc.)
- c. Usage frequency (regular vs. occasional users)

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d. Demographic characteristics (age, gender)

This stratification ensures adequate representation across different user segments and facility types, enhancing the generalizability of findings within the university sports facility context. The sampling process was implemented through:

- Systematic selection from facility user databases
- Random selection within each stratum
- Proportional allocation based on facility usage patterns
- Oversampling of smaller but critical user segments

B. Data Collection

1. Instrument Development

The research instrument was developed through a systematic three-phase process to ensure comprehensive measurement of all constructs. The first phase involved extensive literature review to identify validated scales for each construct. The viral marketing measures were adapted from Kaplan and Haenlein (2011) and Kim and Ko (2012), incorporating dimensions of content appeal, sharing intention, and platform engagement. Service quality measures were based on the SERVQUAL framework (Parasuraman et al., 2018), modified to reflect both physical and digital service aspects of sports facilities.

Trust measures were developed from Morgan and Hunt's (1994) trust scales and recent digital trust indicators (Chen et al., 2024), while purchase decision measures were adapted from established consumer behavior scales (Solomon, 2023). All scales were contextualized to the university sports facility setting through expert consultation and pilot testing.

2. Measurement Scales

The final questionnaire comprised 66 items across four main constructs:

Viral Marketing (24 items):

- Content attractiveness (6 items, e.g., "The social media content is visually appealing")
- Message virality (6 items, e.g., "I would share this content with others")
- Platform engagement (6 items, e.g., "The content is suitable for the platform")
- Social influence (6 items, e.g., "The content encourages interaction with others")

Service Quality (15 items):

- Tangibles (3 items, e.g., "The facilities are modern and well-maintained")
- Reliability (3 items, e.g., "Services are delivered as promised")
- Responsiveness (3 items, e.g., "Staff respond promptly to requests")
- Assurance (3 items, e.g., "Staff demonstrate professional competence")
- Empathy (3 items, e.g., "Individual attention is provided to users")

User Trust (12 items):

- Ability trust (4 items, e.g., "The facility demonstrates competence")
- Benevolence trust (4 items, e.g., "The facility acts in users' best interests")
- Integrity trust (4 items, e.g., "The facility maintains honest communications")

Purchase Decision (15 items):

- Need recognition (3 items, e.g., "The service meets my fitness needs")
- Information search (3 items, e.g., "I actively seek information about services")
- Alternative evaluation (3 items, e.g., "I compare different facility options")
- Purchase intention (3 items, e.g., "I intend to use these services")
- Post-purchase behavior (3 items, e.g., "I plan to continue using these services")

All items were measured using a 4-point Likert scale (1 = strongly disagree to 4 = strongly agree) to avoid neutral responses and encourage definitive judgments. The questionnaire was administered in both Indonesian and English, with back-translation procedures ensuring equivalence between versions.

3. Validation Process

The instrument validation followed a rigorous multi-step process:

Preliminary Validation:

- Expert panel review (n=4) including marketing academics and sports facility managers
- Content validity assessment through structured feedback forms
- Linguistic validation through professional translators

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Pilot Study (n=50):

- a. Initial reliability testing (Cronbach's alpha > 0.80 for all constructs)
- b. Item analysis for clarity and relevance
- c. Response pattern analysis
- d. Average completion time assessment (15-20 minutes)

Final Validation:

- a. Exploratory Factor Analysis (EFA) with pilot data
- b. Confirmatory Factor Analysis (CFA) with main study data
- c. Construct reliability assessment (composite reliability > 0.70)
- d. Convergent and discriminant validity testing
- e. Model fit evaluation using standard indices

The validation process resulted in refinements to item wording, scale anchors, and questionnaire structure, ensuring robust measurement properties for the main study implementation.

C. Analysis Methods

1. PLS-SEM Application

Partial Least Squares-Structural Equation Modeling (PLS-SEM) was selected as the primary analytical technique for several reasons:

- a. Ability to handle complex models with multiple mediating relationships
- b. Suitability for predictive research objectives
- c. Robustness with non-normal data distributions
- d. Capability to analyze both reflective and formative measurement models

The analysis was conducted using SmartPLS 4.1 software, following Hair et al.'s (2022) two-step approach:

- 1) Evaluation of the measurement model
 - a. Assessment of indicator reliability
 - b. Testing of internal consistency
 - c. Examination of convergent and discriminant validity
- 2) Assessment of the structural model
 - a. Path coefficient estimation
 - b. Effect size calculation
 - c. Predictive relevance evaluation
 - d. Model fit assessment

2. Reliability and Validity Tests

The measurement model was evaluated using multiple criteria to ensure robust results:

Internal Consistency Reliability:

- a. Cronbach's alpha (threshold > 0.70)
- b. Composite reliability (threshold > 0.70)
- c. Rho_A reliability coefficient (threshold > 0.70)

Convergent Validity:

- a. Factor loadings (threshold > 0.70)
- b. Average Variance Extracted (AVE) (threshold > 0.50)
- c. Item-to-total correlations (threshold > 0.50)

Discriminant Validity:

- a. Fornell-Larcker criterion
- b. Heterotrait-Monotrait ratio (HTMT) (threshold < 0.85)
- c. Cross-loading examination

Model Fit Assessment:

- a. Standardized Root Mean Square Residual (SRMR) (threshold < 0.08)
- b. Normed Fit Index (NFI) (threshold > 0.90)
- c. Root Mean Square Error of Approximation (RMSEA) (threshold < 0.08)

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3. Hypothesis Testing Procedures

The hypothesis testing process followed a systematic approach:

Direct Effects Analysis:

- Path coefficient estimation using bootstrapping (5000 resamples)
- Significance testing at multiple levels ($p < 0.05, 0.01, 0.001$)
- Effect size assessment using Cohen's f^2 values
- Confidence interval calculation for path coefficients
- Mediation Analysis:
 - Specific indirect effects examination
 - Total indirect effects calculation
- Variance Accounted For (VAF) assessment
- Multiple mediation path analysis
- Additional Analyses:
 - Multi-group analysis for demographic comparisons
 - Importance-performance matrix analysis (IPMA)
 - Predictive relevance assessment using blindfolding (Q^2 values)
 - Model explanation power evaluation (R^2 values)
- The analysis results were validated through:
 - Sensitivity analysis with different model specifications
 - Robustness checks with alternative estimation methods
 - Common method bias assessment
 - Endogeneity testing

IV. RESULTS

A. Descriptive Statistics

The analysis of descriptive statistics provides a comprehensive overview of the sample characteristics and preliminary patterns in the data. The results are presented across three main categories: demographic profile, service usage patterns, and social media preferences.

1. Demographic Profile

The sample ($N=384$) demonstrated a balanced representation across key demographic variables (Table 1). Age distribution showed a predominance of young adults, with 75.5% of respondents aged 20-35 years, followed by 15.3% aged 36-45 years, and 9.2% above 45 years. Gender distribution was relatively balanced, with 52.1% male and 47.9% female respondents. Educational background revealed a mix of undergraduate (62.5%) and graduate (37.5%) participants, reflecting the university community's composition.

Table 1: Sample Demographic Characteristics

Characteristic	Category	Frequency	Percentage
Age	20-35 years	290	75.5%
	36-45 years	59	15.3%
	>45 years	35	9.2%
Gender	Male	200	52.1%
	Female	184	47.9%
Education	Undergraduate	240	62.5%
	Graduate	144	37.5%
Income Level	Below Average	99	25.8%
	Average	195	50.8%
	Above Average	90	23.4%

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2. Service Usage Patterns

Analysis of facility usage revealed distinct patterns in service utilization (Figure 2). Regular users constituted 85.2% of the sample, while 14.8% were occasional users. Swimming pools emerged as the most popular paper. facility (45.6%), followed by fitness centers (32.8%), sports halls (15.9%), and stadiums (5.7%). Usage frequency analysis showed that:

- Daily users: 28.4% (primarily fitness center users)
- Weekly users: 43.2% (predominantly swimming pool users)
- Monthly users: 13.6% (mainly sports hall users)
- Occasional users: 14.8% (varied facility usage)

3. Social Media Preferences

Social media engagement analysis revealed high platform utilization rates among respondents (Table 2). The majority (92.2%) actively used social media platforms to gather information about university sports facilities. Platform preferences showed distinct patterns:

Table 2: Social Media Platform Usage

Platform	Primary Use	Secondary Use	Total Usage
Instagram	58.6%	22.3%	80.9%
TikTok	33.6%	28.9%	62.5%
YouTube	18.0%	35.2%	53.2%
Facebook	15.8%	25.6%	41.4%

Content engagement analysis revealed that:

- Visual content (photos/videos) received 73% higher engagement than text-only posts
- User-generated content garnered 2.5 times more interactions than institutional posts
- Facility showcase posts achieved 45% higher reach compared to promotional content
- Real-time updates and stories showed 68% higher view-through rates

These descriptive findings provide context for understanding the relationship between viral marketing strategies, service quality perceptions, and user trust in university sports facilities. The data suggests strong social media engagement potential and clear patterns in facility usage that can inform targeted marketing strategies and service improvements.

B. Measurement Model Assessment

The measurement model was evaluated following Hair et al.'s (2022) guidelines for PLS-SEM analysis. Assessment included examination of construct reliability, convergent validity, and discriminant validity across all measurement items and constructs.

1. Construct Reliability

All constructs demonstrated strong reliability, exceeding recommended thresholds across multiple indicators (Table 3). Internal consistency was assessed using three complementary measures:

Table 3: Construct Reliability Measures

Construct	Cronbach's α	Composite Reliability	Rho_A	Items
Viral Marketing	0.934	0.947	0.938	24
Service Quality	0.912	0.928	0.915	15
User Trust	0.896	0.921	0.899	12
Purchase Decision	0.908	0.924	0.911	15

Detailed analysis of individual constructs revealed:

Viral Marketing Dimensions:

- Content attractiveness ($\alpha = 0.892$, CR = 0.918)
- Message virality ($\alpha = 0.901$, CR = 0.924)
- Platform engagement ($\alpha = 0.887$, CR = 0.915)

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d. Social influence ($\alpha = 0.894$, CR = 0.919)

Service Quality Dimensions:

- Tangibles ($\alpha = 0.885$, CR = 0.912)
- Reliability ($\alpha = 0.878$, CR = 0.908)
- Responsiveness ($\alpha = 0.891$, CR = 0.917)
- Assurance ($\alpha = 0.883$, CR = 0.911)
- Empathy ($\alpha = 0.876$, CR = 0.906)

All reliability coefficients exceeded the recommended threshold of 0.70, indicating strong internal consistency across measures.

2. Convergent Validity

Convergent validity was established through examination of factor loadings and Average Variance Extracted (AVE) values. Table 4 presents the detailed analysis:

Table 4: Convergent Validity Assessment

Construct	AVE	Range of Loadings	Items > 0.70
Viral Marketing	0.648	0.723 - 0.891	24/24
Service Quality	0.672	0.712 - 0.884	15/15
User Trust	0.701	0.754 - 0.898	12/12
Purchase Decision	0.683	0.731 - 0.876	15/15

Factor Loading Analysis:

- All items demonstrated significant loadings ($p < 0.001$)
- 100% of items exceeded the recommended 0.70 threshold
- Highest loadings observed in trust measures (range: 0.754-0.898)
- Lowest loadings in service quality measures (range: 0.712-0.884)

Average Variance Extracted (AVE):

- All constructs exceeded the 0.50 threshold
- User trust showed highest AVE (0.701)
- Viral marketing showed lowest AVE (0.648)
- Service quality and purchase decision showed intermediate values

3. Discriminant Validity

Discriminant validity was assessed using three complementary approaches: Fornell-Larcker criterion, Heterotrait-Monotrait (HTMT) ratio, and cross-loading examination.

Table 5: Fornell-Larcker Criterion Analysis

Construct	1	2	3	4
1. Viral Marketing	0.805			
2. Service Quality	0.412	0.820		
3. User Trust	0.487	0.523	0.837	
4. Purchase Decision	0.534	0.498	0.561	0.827

Note: Square root of AVE on diagonal, correlations off-diagonal

HTMT Ratio Analysis:

- All HTMT ratios below the conservative threshold of 0.85
- Highest ratio between user trust and purchase decision (0.827)
- Lowest ratio between viral marketing and service quality (0.412)
- No discriminant validity concerns identified

Cross-Loading Examination:

- All items loaded highest on their respective constructs
- Minimum loading differential of 0.20 maintained

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- c. No significant cross-loading issues detected
- d. Clear distinction between construct measurements

Additional Validity Checks:

Common Method Bias:

- a. Harman's single-factor test revealed no dominant factor
- b. Maximum variance explained by single factor: 28.4%
- c. Full collinearity assessment showed acceptable VIF values (1.2-2.8)

Model Fit Indices:

- a. SRMR = 0.052 (threshold < 0.08)
- b. NFI = 0.921 (threshold > 0.90)
- c. RMSEA = 0.047 (threshold < 0.08)

The measurement model demonstrated robust psychometric properties across all assessment criteria, providing a solid foundation for structural model analysis and hypothesis testing.

C. Structural Model Results

The structural model was evaluated following established guidelines for PLS-SEM analysis (Hair et al., 2022), examining direct effects, mediation effects, and overall model fit.

1. Direct Effects Analysis

The analysis revealed significant positive relationships across all hypothesized direct paths (Table 6):

Table 6: Direct Effects Analysis Results

Hypothesis	Path	β	t-value	p-value	f^2	Result
H1	Viral Marketing → Trust	0.328	5.967	<0.001	0.144	Supported
H2	Service Quality → Trust	0.358	6.817	<0.001	0.170	Supported
H3	Viral Marketing → Purchase Decision	0.318	6.421	<0.001	0.127	Supported
H4	Service Quality → Purchase Decision	0.229	4.204	<0.001	0.064	Supported
H5	Trust → Purchase Decision	0.227	4.432	<0.001	0.055	Supported

Effect size analysis (f^2) indicated:

- a. Medium effects for viral marketing and service quality on trust (0.144 and 0.170)
- b. Small to medium effects for direct paths to purchase decisions (0.055-0.127)
- c. All effect sizes exceeded minimum thresholds for practical significance

2. Mediation Analysis

Examination of indirect effects through user trust revealed significant mediation (Table 7):

Table 7: Mediation Analysis Results

Hypothesis	Indirect Path	β	t-value	VAF	Type
H6	VM → Trust → Purchase	0.074	3.384	0.189	Partial
H7	SQ → Trust → Purchase	0.081	3.562	0.261	Partial

Variance Accounted For (VAF) analysis indicated:

- a. Partial mediation for both indirect paths (VAF between 0.20 and 0.80)
- b. Stronger mediation effect for service quality path (VAF = 0.261)
- c. Complementary mediation pattern supporting theoretical framework

3. Model Fit Assessment

The structural model demonstrated robust explanatory power and predictive relevance:

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Coefficient of Determination (R^2):

- a. Purchase Decision: $R^2 = 0.540$ (moderate to substantial)
- b. User Trust: $R^2 = 0.253$ (moderate)
- c. Adjusted R^2 values within 0.02 of unadjusted values

Predictive Relevance (Q^2):

- a. Purchase Decision: $Q^2 = 0.174$ (medium predictive relevance)
- b. User Trust: $Q^2 = 0.153$ (medium predictive relevance)
- c. All Q^2 values significantly above zero threshold

Model Fit Indices:

- a. SRMR = 0.052 (excellent fit, threshold < 0.08)
- b. NFI = 0.921 (excellent fit, threshold > 0.90)
- c. RMSEA = 0.047 (excellent fit, threshold < 0.08)

The results provide strong support for all hypothesized relationships in the theoretical framework, with significant direct effects and meaningful mediation through user trust. The model demonstrates adequate explanatory power and predictive relevance, with excellent overall fit indices.

V. DISCUSSION

The findings of this study provide significant insights into the integration of viral marketing and service quality in university sports facilities, with important implications for both theory and practice. This section discusses the theoretical contributions, practical implications, and broader impact of the research findings.

A. Theoretical Implications

1. Integration of Digital Marketing and Service Quality

This study makes several notable contributions to existing marketing and service management theory. First, it extends the understanding of how viral marketing and service quality interact in a higher education sports service context. The strong positive relationship between viral marketing and purchase decisions ($\beta=0.318$, $p<0.001$) supports and extends previous findings by Wilson et al. (2024) and Kim and Kim (2023), while adding the crucial dimension of educational institution services. The results demonstrate that viral marketing effectiveness is not merely about content virality but is deeply intertwined with service quality perceptions.

2. Trust as a Mediating Mechanism

The study's findings significantly contribute to trust theory in digital marketing contexts. The identification of trust as a partial mediator in both viral marketing ($VAF=0.189$) and service quality ($VAF=0.261$) relationships with purchase decisions extends the work of Morgan and Hunt (1994) into the digital age. This dual mediation effect suggests that trust functions as a psychological bridge between marketing efforts and behavioral outcomes, particularly in services requiring physical participation.

3. Service Quality in Digital Contexts

The research advances service quality theory by demonstrating how traditional SERVQUAL dimensions interact with digital marketing efforts. The strong direct effect of service quality on trust ($\beta=0.358$, $p<0.001$) suggests that physical service experiences remain crucial even in digitally-driven marketing environments. This finding extends Parasuraman et al.'s (2018) work by showing how service quality contributes to digital trust formation.

4. Theoretical Framework Innovation

The study's integrated framework represents a theoretical innovation in several ways:

a. Multi-dimensional Trust Formation

The results reveal that trust formation in university sports services is multi-dimensional, influenced by both digital (viral marketing) and physical (service quality) touchpoints. This finding challenges simplified models of trust development and suggests a more complex interplay between online and offline factors.

b. Purchase Decision Dynamics

The framework illuminates the dynamic nature of purchase decisions in educational sports services, showing how different factors contribute at various stages of the decision process. The significant direct effects of both viral marketing ($\beta=0.318$) and service quality ($\beta=0.229$) on purchase decisions suggest a complementary rather than competitive relationship between these factors.

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c. Context-Specific Adaptations

The study demonstrates how general marketing and service theories must be adapted for specific institutional contexts. The findings suggest that the educational setting introduces unique considerations in how marketing messages are received and how service quality is evaluated.

B. Practical Implications

1. Digital Marketing Strategy Development

The findings provide actionable insights for universities developing digital marketing strategies for sports facilities. First, the strong relationship between viral marketing and purchase decisions ($\beta=0.318$) suggests that institutions should prioritize content that encourages sharing and engagement. Specific recommendations include:

a. Platform-Specific Content Strategy

- 1) Prioritize Instagram and TikTok based on usage patterns (80.9% and 62.5% respectively)
- 2) Focus on visual content, which showed 73% higher engagement rates
- 3) Develop user-generated content programs to leverage the 2.5x higher interaction rates
- 4) Implement real-time story features that demonstrated 68% higher view-through rates

b. Content Optimization

- a. Emphasize facility showcases, which achieved 45% higher reach than promotional content
- b. Balance promotional messages with authentic user experiences
- c. Create content that highlights both facility quality and service excellence
- d. Develop targeted content for different user segments (students, staff, community members)

2. Service Quality Enhancement

The study's findings regarding service quality's impact on trust ($\beta=0.358$) and purchase decisions ($\beta=0.229$) suggest several operational improvements:

a. Physical Service Elements

- 1) Maintain modern facility standards based on tangibles dimension findings
- 2) Implement regular equipment maintenance schedules
- 3) Ensure cleanliness and safety protocols exceed user expectations
- 4) Design spaces that facilitate both individual and group activities

b. Staff Development

- 1) Provide comprehensive training on technical and interpersonal skill
- 2) Establish clear service standards and performance metrics
- 3) Implement regular feedback mechanisms for service improvement
- 4) Develop specialized training for digital service integration

3. Trust Building Mechanisms

The mediating role of trust suggests the need for systematic trust-building approaches:

a. Digital Trust Development

- 1) Implement transparent pricing and booking systems
- 2) Provide clear facility usage guidelines and policies
- 3) Maintain active social media presence with timely response
- 4) Share authentic user testimonials and success stories

b. Operational Trust Enhancement

- 1) Ensure consistent service delivery across all facilities
- 2) Develop clear communication channels for user feedback
- 3) Implement service recovery protocols for addressing issues
- 4) Maintain regular updates on facility improvements and maintenance

C. Framework Application and Implementation

1. Strategic Implementation Process

The integrated framework developed in this study can be implemented through a systematic four-phase process:

a. Assessment Phase

- 1) Conduct digital presence audit across social media platforms
- 2) Evaluate current service quality using SERVQUAL dimensions

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- 3) Measure baseline trust levels among different user segments
- 4) Analyze existing purchase patterns and user engagement metrics

b. Integration Planning

- 1) Develop synchronized viral marketing and service quality initiatives
- 2) Create cross-functional teams for coordinated implementation
- 3) Establish KPIs aligned with framework componentsDesign feedback mechanisms for continuous improvement

2. Performance Monitoring System

The study's findings suggest a comprehensive monitoring approach:

a. Digital Marketing Metrics

- 1) Content engagemen User-generated content ratio (aim: 40% of total content)
- 2) Platform-specific performance indicators
- 3) Viral coefficient measurement for content spread

b. Service Quality Indicators

- 1) SERVQUAL dimension scores (minimum threshold: 4.0/5.0)
- 2) User satisfaction indices (target: >85% satisfaction)
- 3) Service recovery effectiveness metrics
- 4) Staff performance evaluations

c. Risk Management and Mitigation

The implementation framework includes specific risk management strategies:

1) Digital Risk Management

- a) Content approval workflows to maintain authenticity
- b) Crisis communication protocols for social media
- c) Data privacy and security measures
- d) Regular platform policy compliance audits

2) Operational Risk Control

- a) Service quality consistency monitoring
- b) Staff training and development tracking
- c) Facility maintenance scheduling
- d) Emergency response procedures

3) Success Metrics and Evaluation

The framework provides clear success metrics based on the study's findings:

a) Primary Success Indicators

- 1) Trust level improvement (target: 15% increase annually)
- 2) Purchase decision conversion rates (aim: 25% increase)
- 3) Service quality ratings (minimum: 4.2/5.0)
- 4) Social media engagement growth (target: 40% yearly)

b) Long-term Impact Measures

- 1) Revenue growth from sports facilities
- 2) User retention rates
- 3) Brand equity development
- 4) Community engagement levels

This comprehensive framework application provides universities with a structured approach to implementing the study's findings, ensuring both immediate improvements and sustainable long-term success in sports facility operations.

VI. CONCLUSION

This research advances our understanding of the complex interplay between viral marketing, service quality, and user trust in driving purchase decisions for university sports facilities. Through rigorous empirical analysis of data from 384 respondents at Yogyakarta State University, the study reveals several significant findings that contribute to both theory and practice in digital marketing and service management.

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The analysis demonstrates strong positive relationships between viral marketing and user trust ($\beta=0.328$, $p<0.001$), as well as between service quality and user trust ($\beta=0.358$, $p<0.001$). Both factors significantly influence purchase decisions, with viral marketing showing a direct effect of $\beta=0.318$ ($p<0.001$) and service quality demonstrating an impact of $\beta=0.229$ ($p<0.001$). Notably, user trust emerges as a crucial mediating mechanism, partially mediating both the viral marketing-purchase decision relationship (indirect effect: $\beta=0.074$, $VAF=0.189$) and the service quality-purchase decision relationship (indirect effect: $\beta=0.081$, $VAF=0.261$).

These findings extend existing theory by demonstrating how digital marketing strategies and traditional service quality measures can be effectively integrated in educational sports facilities. The results challenge the conventional view that viral marketing success depends primarily on content virality, instead highlighting the crucial role of service quality and trust in converting marketing efforts into purchase decisions. The study's integrated framework provides a novel approach to understanding how universities can optimize their sports facility operations while maintaining academic excellence.

However, several limitations warrant consideration. The cross-sectional nature of the data limits causal inferences, while the single-institution focus may affect generalizability. The Indonesian higher education context and focus on sports facilities may also limit the broader applicability of findings. Additionally, self-reported measures may introduce common method bias, though statistical tests suggest this is not a significant concern.

Future research should address these limitations through longitudinal studies examining relationship dynamics over time, multi-institution analyses enhancing generalizability, and cross-cultural investigations exploring the framework's applicability in different contexts. Theoretical expansions could explore additional mediating variables and moderating effects of cultural factors, while practical applications might focus on developing implementation frameworks for different institutional settings.

The study's findings have significant implications for universities transitioning to financial independence. The results suggest that successful revenue generation through sports facilities requires a balanced approach integrating digital marketing strategies with service quality improvements, all underpinned by systematic trust-building efforts. The high engagement rates with visual content (73% above text-only posts) and the importance of user-generated content (2.5x higher interaction rates) provide clear direction for digital marketing strategies.

As higher education institutions worldwide face increasing pressure to develop sustainable revenue streams, this research offers both theoretical insights and practical guidelines for optimizing sports facility operations. The findings suggest that success lies not in choosing between digital marketing excellence and service quality improvement, but in their careful integration, with user trust serving as the crucial bridge between marketing efforts and purchase decisions.

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