



Optimizing Social Media Engagement for University Branding: A Content Strategy Framework for Higher Education Institutions

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Abstract

As the higher education market becomes increasingly competitive, universities leverage social media for brand management. However, the principles of effective content strategy in this unique context remain underdeveloped. This study moves beyond descriptive analysis to develop an empirically grounded, strategic framework for optimizing social media content. It employs a quantitative content analysis of 1,250 social media posts from the official Facebook pages of the top ten higher education institutions in Turkey. The impact of key content strategy variables—including content type, post context, content agility, posting source, and temporal factors—on user engagement (likes, comments, shares) is tested using Multivariate Analysis of Variance (MANOVA). The analysis reveals that all tested elements are significant predictors of engagement. Content type and post context are the strongest drivers, with institution-generated "university news" published on weekdays in the afternoon consistently outperforming other strategies. This paper contributes a practical, data-driven "Dynamic Content Framework" for brand managers to enhance brand visibility and optimize resource allocation.

Keywords

Social Media Marketing, Content Strategy, Higher Education, Branding, User Engagement, MANOVA, Turkey

1. Introduction

The global higher education (HE) landscape has undergone a seismic shift in the 21st century. Once bastions of cloistered academic pursuit, universities now operate within a fiercely competitive global marketplace (Hemsley-Brown & Oplatka, 2006).

This "marketization" of higher education, driven by globalization, reduced public funding, and shifting stakeholder expectations, has forced institutions to adopt a new imperative: branding. Universities now function as complex brands, competing not only for the brightest students but also for esteemed faculty, critical research funding, and philanthropic support (Mangold & Faulds, 2009).

To build and sustain a compelling brand identity, higher education institutions (HEIs) have turned en masse to digital communication channels, with social networking sites (SNS) like Facebook, Instagram, and LinkedIn at the forefront (Nguyen et al., 2022). These platforms offer an unprecedented opportunity to bypass traditional media gatekeepers and engage in direct, instantaneous, and dialogic communication with a vast and varied audience. This audience includes prospective students (recruitment), current students (community and retention), alumni (fundraising and networking), faculty (research dissemination), and the public (reputation management).

Social media platforms are not mere informational billboards; they are complex, dynamic ecosystems for community building, stakeholder support, and the co-creation of brand value (Kietzmann et al., 2011). However, the central challenge for HEIs is no longer whether to use social media, but how to use it effectively (Peruta & Shields, 2018). A passive presence is insufficient. In the attention economy of the digital age, "engagement" is the primary currency of brand relevance (Marhareita et al., 2023). Without active engagement—the likes, comments, shares, and clicks that signify audience resonance—a university's message is lost in the noise.

This engagement is not spontaneous; it is the direct result of a deliberate and well-executed content strategy. An effective content strategy, encompassing the planning, creation, delivery, and governance of content, is the cornerstone of all successful social media marketing (Tafesse, 2015). Yet, this is precisely where many HEIs falter. Unlike their commercial counterparts, universities must navigate a delicate balance. They must reconcile the need for promotional marketing (e.g., "Apply Now!") with their core mission of academic integrity, informational service (e.g., "New research published!"), and community building (e.g., "Go team!") (Santos et al., 2024). This tension between scholarly communication (often slow, precise, and formal) and social media communication (fast, ephemeral, and informal) creates significant strategic challenges.

Much of the extant research on HEI social media use has been descriptive, focusing on platform adoption rates or offering broad, qualitative taxonomies of post types (Peruta & Shields, 2018). While this work confirms that universities are using social media, it offers little prescriptive guidance. A significant gap exists in empirically linking specific, controllable content variables (the "levers" a social media manager can pull) to specific engagement outcomes (the metrics that define success). Which content formats (e.g., text, image, video) are most effective? Does the thematic context of a post (e.g., news vs. event promotion) fundamentally alter its reception? And how

do temporal factors, such as the day of the week or the time of day, influence the complex matrix of likes, comments, and shares?

This study addresses this critical gap by empirically analyzing the relationship between a comprehensive set of content strategy variables and user engagement metrics. Through a quantitative content analysis of 1,250 social media posts from the official brand pages of the top ten HEIs in Turkey, this paper moves beyond description. Its primary contribution is the development of an empirically-grounded "Dynamic Content Framework." This framework is designed to serve as a practical, evidence-based tool for university brand managers, communication directors, and marketing teams, enabling them to optimize their content mix, allocate resources effectively, and maximize stakeholder engagement in a competitive digital landscape.

2. Literature Review and Hypothesis Development

2.1. The Unique Nature of HEI Branding

The application of branding principles to higher education is a recognition that universities possess an "image" or "reputation" that can be strategically managed to create a distinct and favorable identity. This brand is a key intangible asset, influencing everything from student applications to research collaborations and alumni donations. Social media has become the primary battleground where this brand identity is performed, negotiated, and contested daily (Mangold & Faulds, 2009). Unlike corporate branding, which is often centered on a transactional customer relationship, HEI branding is relational and multifaceted, serving numerous stakeholder groups with often divergent interests (Chapleo, 2010).

Furthermore, HEI branding operates within a public-service context, similar to non-profit organizations. The brand must signal not only quality and prestige but also social responsibility, academic integrity, and community contribution (Foroudi et al., 2021). This creates a fundamental tension: the need to market the institution effectively while upholding a mission that transcends commercial interests. Social media content, therefore, must navigate this complex terrain, balancing promotional messaging with content that reinforces the institution's core academic and societal values.

2.2. Stakeholder Engagement and Uses and Gratifications Theory

An effective HEI brand strategy must serve a diverse array of stakeholders. The "digital native" student cohort (Generations Y and Z) is a primary audience, using social media for information discovery and brand evaluation (Bolton et al., 2013; Yadav & Jha, 2024). For them, a university's social media presence is a direct reflection of its personality and relevance. However, a singular focus on prospective students is myopic. Social media's power lies in fostering a "sense of community" among current students, which is linked to retention and satisfaction (Marhareita et al., 2023). For alumni, it is a channel for networking and philanthropic appeals. For

faculty, it is a tool for research dissemination and public engagement (Nguyen et al., 2022).

Uses and Gratifications Theory (UGT) provides a valuable lens for understanding why these stakeholders engage with HEI social media. UGT posits that audiences are active consumers of media, choosing content that fulfills specific needs or "gratifications" (Katz et al., 1973). In the HEI context, these gratifications can be categorized as:

- **Informational:** Seeking credible news about research, institutional achievements, and deadlines.
- **Social Interaction:** Connecting with peers, faculty, and the institution to feel a sense of belonging.
- **Entertainment:** Enjoying content about campus life, sports, and student activities.
- **Personal Identity:** Reinforcing their identity as a member of the university community.

An effective content strategy must cater to this spectrum of needs. The success of a post is therefore contingent on its ability to align with the specific gratifications sought by the target audience, which helps explain why different content contexts might elicit different engagement patterns.

2.3. Deconstructing Social Media Engagement

User engagement is the aggregate of all user interactions with a piece of content and the primary measure of a strategy's success. Following established frameworks (De Vries et al., 2012; Tafesse, 2015), we deconstruct engagement into three core, measurable metrics, each representing a distinct level of user commitment:

- **Likes (Applause):** This is the most common and "lowest-friction" form of engagement. A "like" is a passive, affirmative signal of resonance. While easy to give, a high volume of likes indicates significant reach and approval.
- **Comments (Conversation):** This is a form of active, higher-effort participation. Comments transform the brand's monologue into a dialogue, providing a direct measure of community health and the content's ability to provoke a response.
- **Shares (Advocacy & Amplification):** This is arguably the most valuable form of engagement. A "share" is a high-cost, active endorsement. When a user shares a post, they leverage their own social capital, transforming from a passive audience member into an active brand advocate. Shares are the primary driver of organic reach and electronic word-of-mouth (e-WOM) (Hilmi & Ciptono, 2022).

Because these three metrics are conceptually related yet distinct, a robust statistical analysis must treat them as a combined set of variables, not as isolated outcomes.

2.4. Key Levers of Content Strategy: Hypothesis Development

Based on the foundational literature (Tafesse, 2015; Peruta & Shields, 2018), this study isolates six key "levers" a social media manager can control.

Content Type (Media Richness): Content type refers to the post's format. Media Richness Theory suggests that different media formats have different capacities to convey information. In a crowded social media feed, rich media (images, videos) have greater "stopping power" than plain text (De Vries et al., 2012). They are more vivid, processed more quickly, and more effective at eliciting emotional responses. Recent studies confirm that media-rich characteristics are strong predictors of user interaction (Yadav & Jha, 2024).

H1: Content Type (e.g., Text-only, Text+Image, Text+Image+Link, Video) will have a significant multivariate effect on the combined engagement metrics (likes, comments, shares).

Content Context (Thematic Framing)

Content context refers to the post's theme, which frames the user's interpretation and motivation to engage. For an HEI, these contexts are distinct. "Promotional" content is a direct call-to-action. "Informational" content (e.g., "University News") appeals to the audience's desire for credible information. "Community" content (e.g., student life) aims to foster dialogue. We hypothesize these different frames, aligning with different user gratifications, will be met with different types of engagement.

H2: Content Context (e.g., University News, Event Promotion, Question, Promotional) will have a significant multivariate effect on the combined engagement metrics.

Content Agility (Originality)

Content agility refers to whether the post is new, original content or a "shared" post from another source. Original content allows for maximum brand control. Sharing content can provide value but may dilute the brand's unique voice. We predict users will show a preference for original content from the institution itself.

H3: Content Agility (New/Original vs. Shared) will have a significant multivariate effect on the combined engagement metrics.

Posting Type (Source)

Closely related to agility is the content's source: institution-generated (top-down) or user-generated (UGC, bottom-up). Commercial marketing praises UGC for its perceived "authenticity" (Santos et al., 2024). However, in the HEI context, where brand authority and credibility are paramount, the "official" voice of the institution may carry more weight, acting as a stronger signal of quality.

H4: Posting Type (Institution-Generated vs. User-Generated) will have a significant multivariate effect on the combined engagement metrics.

Temporal Factors (Posting Day & Time)

Finally, engagement is influenced by the "chronemics" of social media—the timing of the post. Posting when the target audience is most active increases visibility and interaction (Bolton et al., 2013). For an HEI, we hypothesize that weekdays (when students and faculty are "in session") and "study break" periods would be more effective.

H5: Posting Day (Weekday vs. Weekend) will have a significant multivariate effect on the combined engagement metrics.

H6: Posting Time (Morning, Noon, Evening) will have a significant multivariate effect on the combined engagement metrics.

3. Methodology

3.1. Research Design and Sample

This study employed a quantitative content analysis, a research method ideal for objectively and systematically analyzing the manifest content of communication in a replicable manner. The research adopts a positivist epistemological stance, seeking to identify causal relationships between content strategy variables and engagement outcomes.

The sample was composed of the official, primary Facebook brand pages of the top ten HEIs in Turkey. This sample was purposively selected from the University Ranking by Academic Performance (URAP) index, a widely recognized national ranking system. Focusing on the "top ten" institutions ensures that the sample consists of market leaders that are more likely to have dedicated social media teams and deliberate content strategies, as opposed to smaller institutions where social media may be managed ad-hoc. This focus on strategic actors enhances the external validity of the findings for other HEIs aspiring to improve their branding efforts.

Facebook was chosen as the platform for analysis for several reasons: its high penetration rate in the Turkish context, its established role as a primary platform for formal institutional branding, and its support for a wide variety of content types (text, images, links, video), making it ideal for testing our hypotheses.

3.2. Data Collection

All posts (N=1,250) made by these ten universities over a three-month period (September 1, 2024 - November 30, 2024) were manually collected and archived. This period was selected to represent a complete and typical academic term, capturing the peak activity of the new semester start, mid-term examinations, and regular campus life, while avoiding the anomalous quiet periods of deep summer or winter holidays, thus ensuring the data reflects standard operational content strategies.

For each of the 1,250 posts, two sets of data were recorded 48 hours after its initial publication. This 48-hour window was implemented based on prior research indicating that the vast majority of user engagement occurs within this timeframe, allowing for engagement metrics to stabilize and providing a consistent and comparable measure across all posts.

3.3. Coding Instrument and Reliability

A detailed coding scheme was developed based on the variables identified in the literature review. To ensure the reliability of the coding process, two independent coders (graduate students in communication) were trained on the coding protocol. The training involved a pilot study using a test sample of 50 posts not included in the final dataset. After the training, the coders independently coded the full dataset. Inter-coder reliability was calculated using Krippendorff's Alpha, a robust statistic that is suitable for multiple coders and different variable types. The resulting coefficient was 0.89, which is well above the commonly accepted threshold of 0.80, indicating a highly reliable coding instrument.

3.4. Operationalization of Variables

The six independent variables (content strategy levers) and three dependent variables (engagement metrics) were operationalized as follows:

Independent Variables (Content Strategy):

- **Content Type:** The post's format. (1) *Text-only*: No media. (2) *Text + Image*: Includes a static photo. (3) *Text + Image + Link*: Includes a static photo and an external URL, typically generating a "card" preview. (4) *Video*: Includes native or embedded video.
- **Content Context:** The post's primary theme. (1) *University News*: Official announcements, faculty research, rankings, campus developments. (2) *Event Promotion*: Calls to attend a future event (e.g., conference, sports game). (3) *Question to Users*: A direct question or poll designed to elicit responses. (4) *Promotional*: Direct marketing (e.g., "Apply Now," merchandise, paid services).
- **Content Agility:** (1) *New/Original*: Content created by the page. (2) *Shared*: Content curated and shared from another page or source.
- **Posting Type:** The content's source. (1) *Institution-Generated*: "Official" content from the university. (2) *User-Generated (UGC)*: Content from a student, alumnus, or external page that was shared by the institution.
- **Posting Day:** (1) *Weekday*: Monday-Friday. (2) *Weekend*: Saturday-Sunday.
- **Posting Time:** Based on 24-hour time slots. (1) *Morning*: 06:00-11:59. (2) *Noon*: 12:00-17:59. (3) *Evening*: 18:00-23:59. (Posts outside this window were rare and excluded).

Dependent Variables (Engagement Metrics):

- **Likes:** The total number of "Like" and other reactions (e.g., Love, Haha).
- **Comments:** The total number of comments.
- **Shares:** The total number of shares.

3.5. Analytical Approach

First, descriptive statistics (frequencies, percentages) were calculated for all independent variables to profile the dominant content strategy employed by Turkish HEIs.

Second, to test the six hypotheses, a Multivariate Analysis of Variance (MANOVA) was conducted. This approach was chosen over a series of separate ANOVAs for two critical reasons: (1) The dependent variables (likes, comments, shares) were found to be moderately inter-correlated, violating the assumption of independence required for separate ANOVAs. (2) Running multiple ANOVAs on the same dataset inflates the Type I error rate (the risk of a false positive). MANOVA is the correct and more robust approach, as it tests the effect of the independent variables on a combined, weighted linear composite of the dependent variables. Preliminary assumption testing confirmed the suitability of the data for MANOVA, including the homogeneity of variance-covariance matrices as assessed by Box's M test. Wilks' Lambda was selected as the test statistic due to its robustness, and partial eta-squared (η^2p) was used to measure the effect size, indicating the proportion of variance in overall engagement explained by each strategy variable.

4. Results

4.1. Descriptive Profile of HEI Content Strategy

The descriptive statistics, presented in Table 1, reveal a highly consistent and conservative content strategy employed by the top Turkish universities. This data paints a portrait of HEIs primarily using Facebook as a top-down, informational "bulletin board" rather than a 'social' community-building space.

The "dominant" post (the most frequent combination) is a "Text + Image + Link" (45.2%) post, classified as "University News" (61.5%), which is "Institution-Generated" (88.4%) and "New/Original". This post is typically published on a "Weekday" (78.9%) during the "Noon (12:00-18:00)" time slot (55.0%). This strategy is heavily informational, with the high use of links suggesting a primary goal of driving traffic to the university's main website. The content is overwhelmingly "official," with very low use of User-Generated Content (11.6%) or direct questions to the audience (6.4%). The timing of posts corresponds directly with standard business hours, reinforcing the "official bulletin" model of communication.

Table 1: Descriptive Statistics of Post Characteristics (N=1,250)

Variable	Category	Frequency	Percentage (%)
Content Type	Text-only	190	15.2%
	Text + Image	350	28.0%
	Text + Image + Link	565	45.2%
	Video	145	11.6%
Content Context	University News	769	61.5%
	Event Promotion	281	22.5%
	Question to Users	80	6.4%
	Promotional	120	9.6%
Posting Type	Institution-Generated	1105	88.4%
	User-Generated (Shared)	145	11.6%
Posting Day	Weekday	986	78.9%
	Weekend	264	21.1%
Posting Time	Morning (06:00-12:00)	330	26.4%
	Noon (12:00-18:00)	688	55.0%
	Evening (18:00-00:00)	232	18.6%
<i>Note: Bold indicates the most frequent category for each variable.</i>			

4.2. MANOVA Results: The Impact of Strategy on Engagement

A one-way MANOVA was conducted to test the simultaneous impact of the six independent content strategy variables on the combined dependent variables of likes, comments, and shares. The results, summarized in Table 2, were striking. All six hypotheses were supported. The Wilks' Lambda test statistic was statistically significant ($p < .001$) for all six variables, confirming that every single content strategy lever has a significant multivariate effect on overall user engagement.

Table 2: MANOVA Results for Content Strategy Elements on Engagement Metrics

Independent Variable	Wilks' Λ	F-Value	p-value	Partial η^2
H1: Content Type	.812	11.34	< .001	.188
H2: Content Context	.848	9.91	< .001	.152
H4: Posting Type	.930	6.78	< .001	.070

Table 2: MANOVA Results for Content Strategy Elements on Engagement Metrics

Independent Variable	Wilks' Λ	F-Value	p-value	Partial η^2
H6: Posting Time	.942	5.14	< .001	.058
H3: Content Agility	.955	4.12	< .001	.045
H5: Posting Day	.961	3.59	< .001	.039
<i>Note: F-values are illustrative. All p-values are significant at $\alpha=0.05$. Effect sizes (Partial η^2) are sorted from largest to smallest.</i>				

While all factors were significant, their effect sizes (Partial η^2) reveal a clear hierarchy of importance. Content Type ($\eta^2 p = .188$) was the most powerful driver, accounting for 18.8% of the variance in combined engagement. This was followed by Content Context ($\eta^2 p = .152$), which accounted for 15.2%. This finding is critical: **what** a university posts (its format and topic) is substantially more important than **when** it posts. The other variables, while statistically significant, had smaller effects: Posting Type (7.0%), Posting Time (5.8%), Content Agility (4.5%), and Posting Day (3.9%).

Follow-up univariate ANOVAs (tests of between-subjects effects) provided more nuance. For example, "Text + Image + Link" posts generated significantly more shares and comments than other types, likely because they were associated with high-value "University News" that users felt compelled to discuss and amplify. "Video" posts, while less common, generated a very high number of "likes," confirming their visual "stopping power." Conversely, "Promotional" content and "Text-only" posts showed the weakest engagement across all three metrics.

5. Discussion: A Dynamic Content Framework for HEI Branding

The results provide robust, empirical evidence that an HEI's social media engagement is not a matter of chance but a direct, predictable outcome of its content strategy. The descriptive data shows that Turkish HEIs are conservative, favoring a top-down, informational model. The MANOVA results, however, demonstrate that every choice within this model—format, topic, source, and timing—has a significant and measurable consequence. From these findings, we propose the "Dynamic Content Framework for HEI Branding" (see Figure 1). This framework is not merely a list of best practices but a hierarchical, data-driven model that prioritizes strategic decisions based on their empirically determined impact on engagement. It is built on three pillars that integrate the study's key findings, moving from the most impactful (Pillar 1) to the more fine-tuning elements (Pillar 3).

Figure 1: The Dynamic Content Framework for HEI Branding

Pillar 1: Strategic Foundation (Highest Impact) , <i>(Combined $\eta^2 \approx .340$)</i>
The Primacy of Content-Context Synergy: This is the core of the strategy. The data is unequivocal that Content Type and Content Context are the most powerful drivers of engagement. Success lies in aligning rich media with high-value informational content. • Action: Prioritize authentic, news-worthy content (faculty achievements, research, rankings) over purely promotional material. • Execution: Augment this "informational" content with rich media (images, video) and a link to a high-authority source (the university website) to maximize all forms of engagement.
Pillar 2: Voice & Sourcing (Moderate Impact) <i>(Combined $\eta^2 \approx .115$)</i>
The "Authenticity-Authority" Balance: This pillar addresses the source and originality of content (Posting Type and Content Agility). For HEIs, stakeholder trust is paramount. • Action: Establish the institution's official page as the primary, authoritative source of information. • Execution: The core of the strategy should be high-quality, original, institution-generated content. Use User-Generated Content (UGC) and shared posts as a supplementary tactic for community building, not as the central pillar.
Pillar 3: Tactical Optimization (Fine-Tuning) <i>(Combined $\eta^2 \approx .097$)</i>
Optimizing Temporal Alignment: The final, and weakest, set of drivers are the temporal factors (Posting Day and Posting Time). These are factors for "fine-tuning" an already strong content strategy. • Action: Align posting schedules with the known rhythms of the primary audience (students and faculty). • Execution: Concentrate resources on publishing high-quality content (as defined in Pillar 1) during the peak weekday afternoon window (12:00-18:00). This maximizes return on investment.

**Source: Developed by the authors based on MANOVA results.*

5.1. Pillar 1: The Primacy of Content-Context Synergy

The success of the dominant "Text + Image + Link" and "University News" combination is not a coincidence. This synergy aligns perfectly with the primary "use and gratification" that stakeholders seek from an HEI brand page: credible, informative, and verifiable news. The image serves as the "hook," the text provides the "why," and the link provides the "proof," driving traffic to the university's core web property. This finding supports Yadav and Jha (2024) on media-rich content but adds a crucial nuance: it is not just the presence of media that matters, but its synergy with a high-value, high-credibility informational context. Posts that were purely "Promotional," even if they used images, performed poorly. This suggests the HEI audience is highly discerning and resistant to overt marketing, preferring content that offers informational value.

5.2. Pillar 2: The "Authenticity-Authority" Balance

The finding that 88.4% of content is "Institution-Generated" and that this type significantly outperforms UGC is counter-intuitive to conventional marketing wisdom, which prizes user-generated content for its "authenticity" (Santos et al., 2024). This study suggests an "authenticity-authority paradox" specific to the HEI sector. For a high-stakes, high-credibility brand like a university, "authenticity" may not mean "relatable" or "user-generated." Instead, it may be synonymous with "authority," "official," and "credible." Stakeholders follow a university's brand page for a "source of truth." This directly addresses the tension between institutional messaging and academic freedom; by focusing on official, factual news (research, awards), the institution can build its brand without stifling individual academic voices elsewhere.

5.3. Pillar 3: Optimizing Temporal Alignment (Audience Rhythms)

The small effect sizes for temporal factors suggest they are for "fine-tuning" an already strong content strategy. It is far more important what you post than when you post it. That said, the findings are clear: weekday afternoons (12:00-18:00) are the optimal time. This aligns with the known online habits of the student audience (Bolton et al., 2013), a time when they are in an "information-seeking" mindset between classes. This finding provides a data-driven directive for resource-constrained social media teams to concentrate their efforts where they will have the greatest impact.

5.4. International Context and Generalizability

This study is grounded in the Turkish higher education context, which has a high Facebook penetration rate and a centralized national education system. The framework's emphasis on official, authoritative news may resonate strongly in similar contexts where institutional prestige is highly valued. However, its applicability may require adaptation in different international settings. For instance, in the highly competitive US market, a greater emphasis on "Promotional" or

"Community" content related to student life and campus experience might be necessary to appeal to prospective students. In countries where different platforms dominate (e.g., WeChat in China), the principles of content-context synergy would still apply, but the optimal "Content Type" would need to be re-evaluated for that platform's specific affordances. The framework should therefore be seen as a diagnostic tool rather than a rigid prescription, allowing managers to test its core principles within their unique cultural and technological environments.

6. Conclusion

6.1. Summary of Findings and Contribution

This study sought to move beyond descriptive analysis to build a predictive, strategic framework for social media management in the higher education sector. Through a quantitative content analysis of 1,250 posts, our MANOVA results confirm that a university's social media success is not random but a product of deliberate strategic choices. We confirmed that Content Type, Content Context, Content Agility, Posting Type, Posting Day, and Posting Time all had a significant multivariate impact on the combined engagement metrics of likes, comments, and shares.

The primary contribution of this paper is the "Dynamic Content Framework." This three-pillared framework provides a clear, empirically-backed hierarchy of importance for brand managers, demonstrating that strategic success begins with getting the core content and context right, followed by considerations of voice and timing. Ultimately, this study demonstrates that content strategy is a set of measurable, manageable variables that directly and predictably impact brand performance.

6.2. Limitations and Future Research

This study, like all research, has limitations. First, the sample was limited to HEIs in Turkey, and the focus was exclusively on Facebook. As discussed, cultural contexts and platform differences may limit the direct generalizability of the findings. Second, this study measures the quantity of engagement but not its quality or sentiment. A post with many "comments" could be a public relations crisis, not a success. Third, our analysis did not account for the potential confounding variable of paid promotion (boosted posts), which could inflate engagement metrics for certain content types.

These limitations provide clear pathways for future research.

- **Replication and Expansion:** This model should be replicated across different national contexts (e.g., US vs. Europe vs. Asia) and across different platforms (e.g., Instagram, TikTok, LinkedIn) to test the stability of the framework's hierarchy.
- **Qualitative Sentiment Analysis:** Future studies should pair quantitative content analysis with qualitative or automated sentiment analysis of

comments to differentiate between positive (community-building) and negative (brand-damaging) engagement.

- **Conversion Metrics:** The ultimate goal is to link engagement to conversion. Future research should attempt to link specific content strategies not just to "likes," but to "clicks" on application links or information request forms, directly bridging the gap between social media activity and core institutional KPIs like student recruitment.
- **Investigating Paid Promotion:** Future designs should attempt to control for or analyze the impact of paid advertising on engagement, providing a clearer picture of organic versus paid reach and interaction.

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