

Timing and Message Design in Instagram Stories: Evidence from Personal Shopping Practices in Baghdad

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Abstract

Purpose: This study examines how timing and message design strategies in Instagram stories affect consumer engagement within Baghdad's emerging social and commercial landscape. Drawing on Uses and Gratifications Theory, the research aims to identify the posting practices that maximize visibility, interaction, and user dialogue for personal shopping services.

Method: A quantitative observational design was adopted. Data was collected from 149 Instagram stories posted on a personal shopping account during work days in Iraq between June 1st and July 12th, 2025. Story characteristics were systematically varied across weekday, posting time, content type, video format, text presence, and caption length. Engagement outcomes—including accounts reached, accounts engaged, and direct messages—were obtained from Instagram Insights and analyzed using ANOVA, independent-samples t-tests, and regression models.

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Findings: The results indicate that Stories posted on Thursdays and during daytime to early evening periods (08:00, 12:00, and 18:00) achieved significantly higher reach and engagement, whereas posts published at 22:00 were consistently underperformed. Content type was not a significant predictor of performance; however, long-form videos generated greater reach, and longer captions significantly increased direct message activity. Text-only stories performed comparably to mixed-media stories in terms of reach and engagement, although they did not significantly affect private user dialogue. These findings suggest that timing remains the primary driver of exposure, while message design elements play a more substantial role in shaping conversion-oriented interactions.

Conclusion: The findings demonstrate that effective Instagram marketing in Baghdad requires context-specific optimization rather than reliance on generalized global best practices. By linking temporal and content-related effects to users' gratification-seeking behaviors, this study extends Uses and Gratifications Theory within the social commerce literature and offers practical insights for SMEs and personal shoppers operating in emerging economies.

Keywords: Instagram Stories, Digital Marketing, Social Commerce, Uses and Gratifications Theory, Consumer Engagement, Iraq

Introduction

Digital marketing has become an indispensable element of contemporary business strategy, with social media platforms serving as key channels through which organizations communicate with consumers and influence purchasing behavior. Among these platforms, Instagram has emerged as one of the most influential ones due to its visually driven environment and wide range of interactive features, including Stories, Reels, polls, and direct messaging. These functionalities provide both multinational corporations and small-scale entrepreneurs with opportunities to enhance brand visibility, foster audience engagement, and encourage consumer interaction in a cost-effective manner (Kaplan & Haenlein, 2010; Chaffey & Ellis-Chadwick, 2019).

Despite the growing body of research on Instagram marketing, existing studies have predominantly focused on developed economies. Comparatively little attention has been devoted to understanding how Instagram is adopted and strategically utilized in developing contexts such as Baghdad. Small businesses and personal shoppers operating in Baghdad face a distinct set of challenges, including infrastructural limitations, uneven levels of digital literacy, and culturally embedded consumption practices that shape the ways through which users engage with online content (Soedarsono, Mohamad, Adamu, & Pradita, 2020; Al-Dulaimi, 2021). Consequently, there is a need for context-specific empirical evidence that identifies the content and scheduling strategies most likely to enhance consumer engagement.

Addressing this gap, the present study examines the contribution of Instagram Stories to user engagement within the context of a personal shopping service in Baghdad. In particular, the study investigates how timing-related factors, including the day of the week and posting hour, together with content-related characteristics, namely content type, video format, text presence, and caption length, influence three key engagement outcomes: accounts reached, accounts engaged, and direct messages. To capture engagement patterns within a real-world setting, data was systematically collected over a six-week period from June 1st to July 12th, 2025, covering work days in Iraq (Sunday through Thursday). This approach provides localized and data-driven insights that complement and extend findings derived primarily from studies of global brands and mature digital markets.

The study is grounded in Uses and Gratifications Theory (UGT), which argues that individuals actively select and use media in order to satisfy specific informational, entertainment, and social interaction needs (Katz, Blumler, & Gurevitch, 1973; Ruggiero, 2000). Within the context of Instagram marketing, UGT offers a valuable framework for understanding why certain posting schedules and message formats generate stronger audience responses than others. For example, longer captions may fulfill users' informational needs, whereas short videos and interactive features may provide entertainment or facilitate social interaction (Park & Namkung, 2022). The theory therefore helps explain how different content characteristics may influence engagement behavior on social media platforms.

Accordingly, the study pursues six interrelated objectives. First, it examines the effect of different weekdays on engagement metrics. Second, it evaluates the influence of posting hour across five daily time slots. Third, it investigates the relationship between content type and user interaction. Fourth, it assesses the role of video format in shaping engagement outcomes. Fifth, it tests whether text-only Stories perform differently from Stories containing visual elements. Finally, it explores whether caption length serves as a predictor of engagement, with particular attention to direct message activity.

By focusing on the specific socio-digital environment of Baghdad, this study makes three important contributions. First, it provides empirical evidence on Instagram-based marketing practices among personal shoppers in Iraq, a context that remains underrepresented in the social media and digital marketing literature. Second, it extends the application of Uses and Gratifications Theory to digital marketing in emerging economies, thereby strengthening the connection between theoretical explanation and practical strategy. Third, it offers actionable insights for entrepreneurs, educators, and policymakers seeking to improve digital literacy and optimize social and commercial practices in developing-market settings.

Literature Review

The development of digital marketing has been driven by the convergence of interactive technologies and increasingly consumer-centered forms of communication. Within this evolving landscape, Instagram has emerged as one of the most influential platforms for social commerce due to its ability to integrate visibility, interactivity,

and transactional functionality within a single digital environment (Kaplan & Haenlein, 2010; Manovich, 2017). Recent meta-analyses and systematic reviews demonstrate that Instagram-based advertising positively influences brand awareness, purchase intention, and consumer trust, particularly among younger users who constitute the platform's primary demographic segment (Rahayuningrat, Ardiani, Alisa, Sugiarti, & Taufik, 2024). These findings suggest that Instagram is no longer merely a supplementary marketing channel but has become a central component of contemporary digital marketing strategies.

At the same time, the effectiveness of Instagram marketing depends not simply on platform adoption but on the extent with which content design, posting strategies, and audience expectations are aligned. Previous researches indicate that factors such as entertainment value, interactivity, customization, and alignment with current trends significantly contribute to consumer-based brand equity (Park & Namkung, 2022). Likewise, authenticity and relatability—often achieved through influencer partnerships or user-generated content—have been consistently identified as important determinants of consumer trust and purchasing behavior (Reinikainen, Kari, Luoma-aho, & Töllinen, 2020; Atiq, Abid, Anwar, & Ijaz, 2022). These findings underscore the importance of understanding content attributes and message design within the broader context of audience motivations, a perspective that is well explained by Uses and Gratifications Theory (Katz, Blumler, & Gurevitch, 1973; Ruggiero, 2000).

Despite the growing body of scholarship on Instagram marketing, much of the existing evidence originates from Western and other developed contexts, where digital infrastructure, consumer habits, and market conditions differ substantially from those found in emerging economies. Studies conducted in Southeast Asia and the Middle East indicate that Instagram often serves not only as a communication platform but also as an alternative retail infrastructure (Mohamad, Adamu, & Pradita, 2020; Al-Dulaimi, 2021). In Iraq, for example, personal shoppers frequently use Instagram as a comprehensive business ecosystem through which marketing activities, customer service, and sales transactions are managed via platform features such as Stories, direct messaging, and cash-on-delivery arrangements (Karim, Al-Azzawi, & Jasim, 2022). Such practices illustrate how cultural norms, varying levels of digital literacy, and infrastructural

limitations shape the effectiveness and feasibility of different marketing strategies.

Another prominent theme in the literature concerns the growing role of influencers and micro-influencers as trusted intermediaries between businesses and consumers. Evidence from localized studies suggests that consumer responses are often driven less by celebrity endorsements than by the perceived authenticity and credibility of micro-influencers embedded within community networks (Ahmed, 2022; Djafarova & Bowes, 2021). This observation is particularly relevant in markets such as Baghdad, where informal trust networks frequently compensate for the absence of strong institutional guarantees. In such contexts, the credibility of message sources becomes a critical factor influencing consumer engagement and purchase decisions.

Nevertheless, several important challenges remain insufficiently addressed. The increasing volatility of platform algorithms has reduced the predictability of organic reach, making engagement outcomes more difficult to anticipate (Voorveld, 2019). At the same time, growing content saturation has contributed to audience fatigue, creating additional obstacles to maintaining sustained user engagement (Bright, 2020). Furthermore, many SMEs in Iraq are confronted with structural constraints, including limited analytical capabilities and insufficient familiarity with platform metrics, which hinder the systematic optimization of posting schedules and content formats (Karim et al., 2022). Consequently, although existing researches demonstrate that Instagram can enhance engagement and strengthen brand equity, it provides limited context-specific evidence regarding how timing variables (e.g., posting days and hours) and content characteristics (e.g., format, captions, and interactivity) jointly influence measurable engagement outcomes in developing markets.

Taken together, the literature reveals both areas of consensus and significant research gaps. There is a general agreement that Instagram's core affordances—including short-form video, interactivity, and relatability—play a crucial role in fostering consumer engagement, and that Uses and Gratifications Theory offers a robust theoretical framework for explaining differential audience responses to various content formats. However, empirical investigations conducted within transitional economies such as Iraq remain scarce. Addressing this gap requires a systematic and data-driven examination of how specific

timing and content attributes affect observable engagement outcomes. The present study seeks to fill this gap by providing context-sensitive evidence from the emerging social and commercial environment of Baghdad.

Method

Guided by Uses and Gratifications Theory (UGT), which conceptualizes media consumption as a purposive and need-driven process (Katz, Blumler, & Gurevitch, 1973; Ruggiero, 2000), this study employs a quantitative observational case-study design to investigate the relationship between timing and message design in Instagram Stories and audience engagement within the context of a personal shopping account in Baghdad. Instagram Stories were selected as the focal unit of analysis due to their ephemeral nature, high frequency of use, and suitability for promotional activities, product demonstrations, tutorials, and consumer interaction within social and commercial environments. Focusing on a single professionally managed account enabled the examination of associations between predefined posting strategies and platform-reported engagement outcomes, thereby facilitating theory-informed insights into audience behavior in this market setting. Data was collected over a six-week period, from June 1st to July 12th, 2025. Observations were restricted to work days in Iraq (from Sunday till Thursday), while weekends and official public holidays were excluded to ensure alignment with typical consumer activity patterns. Throughout the observation period, Stories were posted according to a fixed schedule comprising five daily time slots: 08:00, 12:00, 18:00, 22:00, and 24:00. This scheduling approach ensured that each posting time was systematically represented across the study period. Following the completion of each Story's 24-hour visibility cycle, performance metrics were extracted from Instagram Insights and recorded for analysis. Maintaining a consistent posting rhythm enhanced comparability across days and time periods while reducing potential bias associated with irregular posting behavior.

The independent variables represented both temporal and content-related dimensions of message design. Temporal variables included day of the week (Sunday–Thursday) and posting hour (08:00, 12:00, 18:00, 22:00, and 24:00). Content-related variables comprised content type (e.g., repair tutorials, product showcases, text-based promotions, interactive stickers such as polls and Q&A features, before-and-after

comparisons, and countdown posts), content format (photo, video, text-only, or mixed format), video duration (approximately 5–15 seconds for short videos and more than 15 seconds for long videos), text presence (text-only versus non-text Stories), and caption length (short versus long, operationalized through character count). The dependent variables were platform-generated engagement indicators obtained directly from Instagram Insights: accounts reached, representing unique exposures; accounts engaged, reflecting interactions such as reactions, shares, saves, and navigational actions; and direct messages (DMs) initiated in response to a Story. No user-identifying piece of information was collected or analyzed.

To minimize potential design-related confounding effects, the posting schedule followed a predetermined rotation that distributed content types and formats across all days and time slots while maintaining a consistent visual identity and language style throughout the study period. After data verification and completeness checks, the final dataset consisted of Story-level observations with information on posting day, posting time, content type, content format, text presence, caption length, and the three engagement outcomes.

Data analysis was conducted using SPSS. Descriptive statistics were employed to summarize both the distribution of the variables and provide an overview of engagement patterns. One-way analysis of variance (ANOVA) was applied to examine differences across multi-category variables, including day of the week, posting time, content type, and video format. Where statistically significant differences were detected, Least Significant Difference (LSD) post-hoc tests were performed to identify pairwise group differences. Independent-samples t-tests were applied to compare binary variables, specifically text-only versus non-text Stories and short versus long captions. Finally, multiple regression models were estimated to assess the predictive influence of timing and content characteristics on each engagement outcome. Statistical significance was evaluated using a conventional alpha level of $\alpha = .05$.

Ethical considerations were incorporated into the research process. The analysis relied exclusively on aggregated and anonymized Instagram analytics, and no personal identifiers were accessed, stored, or reported. Because the dataset originated from the researcher's professional account and did not involve direct interaction with human participants, additional consent procedures were not required for the

present phase of the study. Any future primary data collection involving participants, such as interviews or surveys, would be conducted in accordance with established informed-consent procedures and relevant research ethics guidelines.

Findings

Drawing on N = 149 Story-level observations gathered on work days in Iraq (Sunday–Thursday) from June 1st, 2025 to July 12th, 2025, we report results by the research question (RQ1–RQ6). Engagement outcomes are: Accounts Reached, Accounts Engaged, and Direct Messages (DMs). All statistics are based on Instagram Insights.

Table 1 summarizes central tendencies for the three outcomes. The dataset shows wide variation in visibility (reach), moderate dispersion in interaction (engagement), and a long tail for DMs.

Table 1. Descriptive statistics of engagement metrics (N = 149)

Variable	Min	Max	Mean	SD
Accounts Reached	700	1,296	898.34	106.66
Accounts Engaged	90	332	162.18	39.38
Direct Messages	0	176	22.64	16.21
Source: Instagram Insights log, June 1st–July 12th, 2025 (work days).				

RQ1: Do days of the week (Sun–Thu) affect reach, engagement, and DMs?

To answer RQ1, which examined whether the day of the week (Sunday–Thursday) affects reach, engagement, and direct messages (DMs), a one-way ANOVA was conducted. The results revealed significant day-of-week effects for both reach and engagement, but not for DMs. Specifically, reach differed significantly across weekdays, $F(4, 144) = 7.306, p < .001$, and engagement also varied significantly, $F(4, 144) = 3.423, p = .010$. In contrast, DMs did not differ significantly across weekdays, $F(4, 144) = 1.282, p = .280$.

Post-hoc LSD comparisons provided further insight into these patterns. For reach, Thursday outperformed all other weekdays, with mean differences of +85.49 compared to Monday ($p = .001$), +114.37 compared to Tuesday ($p < .001$), and +109.21 compared to Wednesday ($p < .001$). Sunday also performed better than Tuesday (+70.19, $p = .009$) and Wednesday (+65.03, $p = .012$). For engagement, Thursday again produced

higher levels of interaction than Sunday (+25.46, $p = .010$), Monday (+26.84, $p = .007$), Tuesday (+23.75, $p = .019$), and Wednesday (+32.50, $p = .001$).

These findings suggest that Thursday is the most effective posting day for maximizing both visibility and public engagement on Instagram Stories in Baghdad, whereas Tuesday and Wednesday tend to generate lower performance. The lack of significant differences in DMs indicates that private interactions are not strongly influenced by the day of posting, suggesting that decisions to initiate direct communication may depend more on content characteristics than on weekday timing.

Table 2. ANOVA by weekday

Outcome	df (between, within)	F	p
Accounts Reached	(4, 144)	7.306	< .001
Accounts Engaged	(4, 144)	3.423	.010
Direct Messages	(4, 144)	1.282	.280

RQ2: Do posting times (08:00, 12:00, 18:00, 22:00, 24:00) affect reach, engagement, and DMs?

The effect of posting time (08:00, 12:00, 18:00, 22:00, and 24:00) on engagement outcomes was examined to answer RQ2. The results indicate that time of day significantly affects reach and engagement, but not direct messages (DMs). A one-way ANOVA revealed significant differences across time slots for reach, $F(4, 144) = 4.225$, $p = .003$, and engagement, $F(4, 144) = 2.895$, $p = .024$, whereas DMs were not significantly influenced by posting time, $F(4, 144) = 1.416$, $p = .231$.

Post-hoc comparisons provided further insight into these differences. Stories posted at 22:00 consistently underperformed, with reach significantly lower than at 08:00, 12:00, and 18:00 (reductions ranging from -82.06 to -92.44, all $p < .01$). Likewise, posts published at 24:00 generated lower reach than those posted at 08:00 (-55.76, $p < .05$) and 12:00 (-66.14, $p < .05$). Engagement followed a similar pattern. Stories posted at 22:00 produced significantly fewer interactions than those posted at 08:00 (-30.32, $p < .05$) and 12:00 (-24.90, $p < .05$). In contrast, only one significant difference emerged for DMs: posts published at 24:00 generated more private messages than those posted at 18:00 (+9.27, $p = .029$).

These findings reveal a clear pattern: daytime and early evening posting times (08:00, 12:00, and 18:00) consistently produce higher levels

of visibility and engagement, whereas late-evening posting (22:00) reduces both reach and interaction. Posts published at midnight (24:00) show moderate overall performance but appear to offer a slight advantage in generating private conversations, suggesting that late-night browsing may encourage users to initiate direct communication despite lower overall visibility. Overall, the results indicate that public engagement with Instagram Stories is highly sensitive to posting time, whereas private messaging behavior appears relatively unaffected by posting hour.

Table 3. ANOVA by posting time

Outcome	df	F	p
Accounts Reached	(4, 144)	4.225	.003
Accounts Engaged	(4, 144)	2.895	.024
Direct Messages	(4, 144)	1.416	.231

RQ3: Do content types differ (tutorials, showcases, text-promo, interactive stickers, before/after, countdown)?

The third research question examined whether different content types—including tutorials, product showcases, text-based promotions, interactive stickers (polls and Q&A), before-and-after comparisons, and countdowns—have different effects on reach, engagement, and direct messages (DMs). The results showed no significant differences across any of these categories. ANOVA findings indicated that reach, $F(5, 143) = 0.888$, $p = .491$, engagement, $F(5, 143) = 0.987$, $p = .428$, and DMs, $F(5, 143) = 0.698$, $p = .626$, were not significantly influenced by the type of Story content posted.

These findings suggest that, within the context of Instagram-based personal shopping in Baghdad, the timing of a post may be more important than its content category. Unlike studies conducted in other contexts that identify specific formats, such as influencer endorsements or storytelling, as key drivers of engagement, the present results indicate that local audiences do not respond differently to the six content types examined. Instead, visibility and engagement appear to be shaped primarily by temporal factors, including the day of the week and posting hour, while private interactions seem more closely associated with captioning practices.

Overall, the findings indicate that content categories alone are weak predictors of consumer engagement. For practitioners, this suggests that investing substantial effort in differentiating among these content types

may yield limited benefits unless combined with strategically selected posting times and complementary design elements such as caption length. More broadly, the results reinforce the central conclusion of this study: timing remains the primary determinant of engagement outcomes in this context, whereas content type plays a comparatively minor role.

Table 4. ANOVA by content type

Outcome	df	F	p
Accounts Reached	(5, 143)	0.888	.491
Accounts Engaged	(5, 143)	0.987	.428
Direct Messages	(5, 143)	0.698	.626

RQ4: Does video format (no video, short, long) matter?

The fourth research question examined whether video format—categorized as no video, short video, and long video—resulted in different levels of reach, engagement, and direct messages (DMs). The results showed that video format significantly affected reach, but not engagement or DMs. ANOVA findings confirmed a significant effect on reach, $F(2, 146) = 4.421$, $p = .014$, whereas engagement, $F(2, 146) = 1.262$, $p = .286$, and DMs, $F(2, 146) = 0.577$, $p = .563$, did not differ significantly across formats. Post-hoc LSD comparisons provided further insight into these differences. Long videos outperformed both short videos and Stories without video in terms of reach, generating significantly higher visibility among users. Specifically, long videos reached more accounts than no-video Stories (+43.95, $p = .037$) and short videos (+62.75, $p = .004$). The difference between no-video and short-video Stories was not statistically significant (−18.80, $p = .361$). These findings suggest that longer videos are particularly effective in maximizing exposure, possibly because they provide richer visual and informational content that encourages users to spend more time viewing the Story.

However, this advantage in reach did not translate into higher levels of engagement or private communication. Engagement did not differ significantly across the three video formats, and no meaningful differences were observed for DMs. This indicates that although long-form videos are effective in attracting attention, they do not necessarily encourage greater interaction or conversation initiation. Overall, the findings suggest that long videos are effective in increasing visibility but do not enhance engagement or DMs. This highlights an important distinction in Instagram marketing: strategies that increase exposure are not always the same as

those that encourage active interaction or trust-based communication. For personal shoppers in Baghdad, long-form video may be most useful when the primary objective is reach, whereas other factors, such as caption length or posting time, may be more important for stimulating engagement and private conversations.

Table 5. ANOVA & LSD—video format (outcome = reach)

Contrast	Mean diff.	p	Result
Long – No video	+43.95	.037	Significant
Long – Short	+62.75	.004	Significant
No video – Short	–18.80	.361	n.s.

RQ5: Do text-only Stories differ from mixed-media Stories?

The fifth research question examined whether text-only Stories differ in performance from mixed-media Stories that combine text with visual elements. Independent-samples t-tests were conducted, comparing 51 text-only posts with 98 mixed-media posts. The results indicated no statistically significant differences at the 0.05 level, although some marginal patterns were observed.

For reach, text-only Stories ($M = 921.61$, $SD = 119.06$) slightly outperformed mixed-media Stories ($M = 886.22$, $SD = 98.07$), with $t(147) = -1.94$, $p = .054$. For engagement, text-only Stories also showed marginally higher interaction ($M = 170.84$, $SD = 43.78$) compared to mixed-media Stories ($M = 157.67$, $SD = 36.30$), $t(147) = -1.96$, $p = .052$. In contrast, no significant difference was found for direct messages, with mixed-media Stories averaging 23.27 ($SD = 18.40$) compared to 21.41 ($SD = 10.89$) for text-only Stories, $t(147) = 0.66$, $p = .508$.

Overall, these results suggest that text-only content performs comparably to mixed-media content in terms of reach and engagement, and may even demonstrate a slight, though non-significant, advantage in these outcomes. However, text-only Stories do not appear to offer any advantage in generating direct messages. In the context of Baghdad's personal shopping market, this indicates that audiences are willing to engage with informational, text-based content even in the absence of visual elements, but that private communication—an important driver of conversion—may require additional persuasive or interactive design features beyond text alone.

Table 6. Text-only vs. non-text—group means & t tests

Outcome	Group	N	Mean	SD	t(df)	p
Reach	Non-text	98	886.22	98.07	-1.94(147)	.054
	Text-only	51	921.61	119.06		
Engagement	Non-text	98	157.67	36.30	-1.96(147)	.052
	Text-only	51	170.84	43.78		
DMs	Non-text	98	23.27	18.40	0.66(147)	.508
	Text-only	51	21.41	10.89		

RQ6: Does caption length (short vs. long) matter?

The sixth research question examined whether caption length—short versus long—affects engagement outcomes. Independent-samples t-tests revealed a significant effect only on direct messages (DMs), while reach and public engagement remained unaffected. For reach, no meaningful difference was observed between short captions ($M = 897.16$) and long captions ($M = 900.08$), $t(147) = -0.16$, $p = .870$. Engagement also showed virtually identical results across the two groups, with short captions averaging 162.57 interactions and long captions 161.59, $t(147) = 0.15$, $p = .881$. In contrast, DMs showed a statistically significant difference, with long captions generating more private conversations ($M = 26.08$) compared to short captions ($M = 20.31$), $t(147) = -2.16$, $p = .033$.

These findings highlight a clear strategic distinction. Caption length does not appear to influence visibility or general interaction; however, it plays a significant role in driving private communication. In particular, longer captions are associated with a higher likelihood of initiating direct messages, which represent a key engagement outcome in personal shopping contexts.

Overall, the results suggest that longer captions provide additional informational and persuasive cues that encourage followers to initiate one-on-one communication. This is particularly relevant in Baghdad's informal e-commerce environment, where trust-building and direct interaction are pivotal to purchase decisions. Practically, this implies that personal shoppers may benefit from using longer captions when the objective is to convert passive viewers into active customers through private dialogue, while relying on timing and video-related strategies in order to maximize reach and public engagement.

Table 7. Short vs. long captions—group means & *t* tests

Outcome	Group	N	Mean	SD	t(df)	p
Reach	Short	89	897.16	109.16	−0.16(147)	.870
	Long	60	900.08	103.73		
Engagement	Short	89	162.57	40.76	0.15(147)	.881
	Long	60	161.59	37.57		
DMs	Short	89	20.31	9.99	−2.16(147)	.033*
	Long	60	26.08	22.13		
*Note: $p < .05$ marked with .						

By and large, the results across all six research questions provide a coherent and integrated account of how timing and message design shape engagement with Instagram Stories in the Baghdad personal shopping context.

The strongest and most consistent pattern emerges from temporal variables. Both day of the week and posting time significantly influenced reach and public engagement. Stories posted on Thursdays generated the highest levels of visibility and interaction, whereas mid-week posts (particularly Tuesday and Wednesday) showed weaker performance. Similarly, daytime and early evening slots (08:00, 12:00, and 18:00) produced superior outcomes, while 22:00 consistently reduced both reach and engagement. In contrast, DMs were largely unaffected by weekday or hourly variation, with the exception of a modest increase at 24:00. Overall, these findings indicate that timing is the primary driver of exposure and public interaction, consistent with Uses and Gratifications Theory, which emphasizes the role of user availability and daily media consumption rhythms.

By comparison, message design variables exhibited more differentiated effects. Content type (tutorials, showcases, promotions, interactive stickers, before-and-after comparisons, and countdowns) did not significantly influence any of the engagement outcomes, suggesting that “what” is posted is less important than “when” it is posted in this context. However, format and caption-related features showed more specific effects. Long videos significantly increased reach compared to both short videos and static content, indicating that richer visual narratives are more effective in capturing attention. Text-only Stories performed similarly to mixed-media Stories, suggesting that audiences do not

penalize simpler formats when the content is informative and relevant. Most notably, caption length played a key role in shaping private communication: although it had no effect on reach or engagement, long captions generated significantly more DMs, highlighting their importance in facilitating personalized interaction and trust-building.

In synthesis, the findings reveal a dual structure of engagement dynamics. Temporal factors primarily determine exposure and public interaction, with Thursdays and daytime/early evening periods representing optimal posting windows. In contrast, message design features influence the transition from passive viewing to private communication, with long-form videos enhancing visibility and extended captions encouraging direct dialog. For practitioners, these results suggest that effective Instagram marketing in Baghdad requires a combined strategy: optimizing posting time for maximum reach, using long videos to enhance visibility, and employing detailed captions when the objective is to stimulate one-to-one communication with potential customers.

Conclusion

The present study investigated how temporal patterns and message design choices in Instagram Stories influence user engagement for a personal shopping account operating in Baghdad. By systematically analyzing 149 Stories posted during work days over a six-week period between June and July 2025, the research provides empirical evidence on a topic that has largely been discussed through generalized assumptions derived from Western markets. In contrast to those contexts, Instagram in Iraq often functions not merely as a communication platform but as a full commercial ecosystem where marketing, customer interaction, and transactional negotiation occur simultaneously through Stories and direct messages. Against this background, the study aimed to identify how specific posting strategies, particularly timing and message design characteristics, shape measurable engagement outcomes. The results demonstrate that both temporal patterns and message features exert distinct and measurable influences, although their effects vary across three dimensions of engagement: visibility (reach), public interaction (engagement), and private dialog (direct messages).

The most consistent evidence emerging from the analysis pertains to the importance of temporal factors. Statistical tests showed that both day of the week and posting hour significantly affect reach and public engagement. Stories posted on Thursdays achieved the highest levels of

visibility and interaction, while mid-week posts, particularly those shared on Tuesdays and Wednesdays, generated the lowest performance. Similarly, daytime and early evening slots (08:00, 12:00, and 18:00) generated substantially stronger outcomes than late evening posts, with Stories published at 22:00 consistently underperforming in both reach and engagement. These patterns support prior research emphasizing that digital media consumption is structured by daily routines and attention cycles (Voorveld, 2019; Bright, 2020). Within the Baghdad context, the particularly strong performance of Thursday posts may be explained by its position as the final work day before the weekend, when users are more likely to engage in casual browsing and social interaction.

These findings reinforce the core assumptions of Uses and Gratifications Theory (UGT), which conceptualizes media consumption as a purposive activity guided by users' needs and situational motivations (Katz et al., 1973; Ruggiero, 2000). According to this framework, individuals actively select media content and interaction opportunities that align with their immediate social, informational, or entertainment needs. The observed influence of posting day and hour therefore suggests that engagement with Instagram Stories is closely tied to temporal accessibility: users are more receptive to commercial messages when the platform fits naturally into their daily routines and leisure windows. In this sense, the study provides empirical support for the argument that gratification attainment in social media environments is not only content-driven but also strongly conditioned by the temporal context in which users encounter the message.

While timing variables demonstrated clear and consistent effects, the influence of message design variables was more nuanced. The analysis found no statistically significant differences across six content categories, including tutorials, product showcases, promotional text posts, interactive stickers, before-and-after comparisons, and countdowns. This result contrasts with some strands of international research that emphasize the engagement potential of particular formats such as storytelling or influencer collaborations (Reinikainen et al., 2020; Park & Namkung, 2022). Instead, the Baghdad data indicate that local audiences do not strongly differentiate between these content types when deciding whether to view or interact with a Story.

This outcome has important theoretical implications. Within the UGT framework, it suggests that gratification in this specific social commerce environment is driven less by thematic variation and more by situational

relevance. In other words, users appear to prioritize when content becomes available rather than the categorical nature of the message itself. For practitioners operating in similar markets, this implies that investing heavily in diversifying Story categories may not substantially improve engagement unless those posts are delivered at strategically advantageous times.

However, not all aspects of message design were insignificant. While content type itself did not shape engagement outcomes, certain structural elements of the message, particularly video format and caption length, played a decisive role in specific engagement pathways. The analysis revealed that long-form video Stories significantly increased reach compared with both short videos and non-video content. This finding aligns with that of the prior research demonstrating that richer visual narratives capture user attention more effectively and enhance message recall (Hu et al., 2022). Within the logic of UGT, this effect can be interpreted as fulfilling entertainment- and attention-related gratifications. Users scrolling through Stories may be more likely to pause and watch longer video content because it offers a more immersive viewing experience. Interestingly, however, the increased reach associated with long-form video did not translate into higher levels of public interaction or private messaging. This distinction highlights an important conceptual separation between exposure-oriented and interaction-oriented gratifications. While visually rich content can capture attention and increase passive consumption, it does not necessarily motivate users to engage more actively with the seller.

By contrast, caption length proved to be a critical factor in stimulating private dialog. The analysis demonstrated that long captions generated significantly more direct messages than short captions, even though both performed similarly in terms of reach and general engagement. This finding provides a meaningful extension of UGT within the context of social commerce. It suggests that different engagement behaviors correspond to different types of user motivations. Reach and public interactions may reflect relatively low-effort gratifications associated with browsing, entertainment, or curiosity. Direct messages, however, appear to be driven by deeper informational and trust-seeking motivations.

This distinction is particularly relevant in the Baghdad personal shopping environment, where transactions frequently depend on one-to-one communication between buyers and sellers. Long captions provide additional product details, pricing explanations, or persuasive cues that

encourage users to initiate private conversations. In doing so, they act as a bridge between passive viewing and active interpersonal exchange. From a theoretical standpoint, this finding illustrates how differently Story features can activate diverse gratification pathways along the engagement funnel (from exposure to interaction to dialog).

Another notable finding pertains to the performance of text-only Stories. The results show that these posts performed comparably to mixed-media Stories in terms of both reach and engagement. This outcome diverges somewhat from findings of the prior research emphasizing visual richness as a universal driver of social media engagement (Manovich, 2017). Instead, the evidence suggests that audiences in this market do not necessarily penalize less visually complex content if the information provided is perceived as useful or relevant. This again underscores the importance of contextualizing digital marketing strategies within specific cultural and infrastructural environments.

On balance, the findings contribute to the literature in several important ways. First, they reinforce the integral role of timing in shaping engagement outcomes, providing empirical evidence that media gratifications in social commerce environments are strongly time-contingent. Second, the study refines the understanding of message design by demonstrating that structural features such as video length and caption depth may matter more than content category in determining engagement pathways. Third, by focusing on a personal shopping account in Baghdad, the research addresses a notable geographical gap in the existing literature, which has predominantly examined social media marketing dynamics in North America, Europe, and Eastern Asia.

From a practical perspective, the results offer clear guidance for entrepreneurs and small businesses operating within Instagram-based commerce ecosystems. Sellers seeking to maximize visibility should prioritize posting on Thursdays and during daytime or early evening hours, when users are most receptive to browsing commercial Stories. Long-form video content appears particularly effective for increasing reach and attracting viewer attention. However, when the goal is to stimulate direct customer inquiries or initiate purchase conversations, longer captions become the more strategic tool. By providing greater informational depth, these captions encourage followers to move beyond passive viewing and engage in private communication with the seller.

Despite these contributions, several limitations should be acknowledged. First, the analysis focuses on a single Instagram account

operating within the personal shopping sector in Baghdad. While this case-study approach enables detailed and context-specific insight, it also limits the generalizability of the findings to other industries, geographic contexts, or social media platforms. Second, the study relies on observational data extracted from platform analytics. As a result, the analysis identifies statistical associations rather than causal relationships, and engagement outcomes may also be influenced by factors such as algorithmic ranking, audience composition, or external events. Third, the dataset covers a relatively short period (six weeks) and includes only work days, meaning that seasonal fluctuations or weekend consumption patterns could not be examined.

Future research could extend this line of inquiry in several ways. Studies involving multiple Instagram accounts across different sectors would allow for broader generalization and comparative analysis. Longer observation periods could also capture seasonal trends and platform algorithm changes that influence engagement dynamics. In addition, integrating quantitative analytics with qualitative methods, such as user interviews or surveys, would provide direct insight into the motivations and gratification needs driving user behavior. Comparative research across different countries or social media platforms would further enhance understanding of how cultural norms, technological infrastructures, and market maturity shape the relationship between message design, timing, and audience engagement.

In conclusion, this study demonstrates that effective Instagram marketing in emerging social and commercial environments depends not on universal best practices but on strategies calibrated to local user behavior and platform usage patterns. By integrating empirical findings with the Uses and Gratifications framework, the research shows that engagement outcomes on Instagram Stories reflect purposive media use shaped by temporal routines, informational needs, and trust-building motivations. In emerging markets such as Iraq, where social media platforms frequently substitute for formal retail infrastructures, understanding these behavioral dynamics is essential for both scholars and practitioners seeking to enhance the effectiveness of digital marketing strategies.

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