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The Impact of Social Media Promotional Activity Types and Design on User Experience and Participation Intention

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Abstract

This study investigates the impact of Social Media Promotional Activity Types (SPAT) and Social Media Promotional Activity Design (SPAD) on User Experience (UX) and Participation Intention (PI). By integrating concepts from Uses and Gratifications Theory (UGT), Technology Acceptance Model (TAM), and Elaboration Likelihood Model (ELM), this research provides a comprehensive analysis of how different social media promotional strategies influence user behavior. Data were collected through a self- administered online questionnaire from 400 active users of various social media platforms, and analyzed using Structural Equation Modeling (SEM). The results demonstrate that both SPAT and SPAD significantly affect UX, which in turn mediates the relationship between these promotional activities and PI. This study offers meaningful contributions for marketers on how to enhance user engagement and participation through rigorously designed and strategically tailored social media promotions. The structural model showed that all hypothesized paths were significant at $p < .001$, with the model explaining 72% of the variance in participation intention ($R^2 = 0.72$). The findings contribute to the existing literature by highlighting the critical role of UX in driving participation intention and offer practical recommendations for optimizing social media marketing strategies.

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1. Introduction

In recent years, social media has transformed the landscape of digital marketing, becoming a dominant platform for engaging consumers and driving brand awareness. Social media platforms such as Facebook, Instagram, and others are now central to many companies' promotional strategies, offering unprecedented opportunities for businesses to connect with their target audiences in real-time. This shift towards social media marketing has allowed companies to employ a wide array of promotional activity types, from video advertisements to interactive quizzes and discount promotions, all aimed at enhancing user experience and encouraging participation intention. As these platforms continue to evolve, so too does the need for a deeper understanding of how different promotional activities and design features influence user behavior.

Marketing activities on social media platforms are not homogeneous; they vary significantly in their approach and design. These variations, including the type of promotional activity (e.g., interactive quizzes versus traditional product placements) and the design elements (e.g., visual aesthetics and interactivity), can have diverse impacts on user experience [1, 2]. Positive user experiences have been shown to enhance user satisfaction, enjoyment, and

social identification [3], which in turn can increase participation intention [4]. However, the effectiveness of these activities is contingent on how well they align with user preferences and platform dynamics. Therefore, understanding the nuanced effects of these promotional activity types and their design features is critical for optimizing social media marketing strategies [1, 2].

Existing research, including studies by Jamil et al. (2022) [1] and Xie et al. (2022) [2], highlights the importance of social media marketing activities (SMMAs) in influencing user behavior. These studies emphasize that entertainment, interaction, trendiness, customization, and word of mouth are key dimensions that shape user engagement. Additionally, theories such as the Technology Acceptance Model (TAM) and the Elaboration Likelihood Model (ELM) provide valuable frameworks for understanding how design features and user perceptions influence participation intention. Despite these insights, there is still a gap in the literature regarding the direct and indirect effects of different social media promotional activity types and designs on user experience and participation intention.

Prior studies highlight key SMMA dimensions and theoretical frameworks such as TAM and ELM. However, current research still presents several important limitations. Over 70% of studies rely on cross-sectional, self-reported data rather than behavioral or longitudinal evidence. Many findings are drawn from single platforms or student samples, reducing generalizability. Comparative studies across different promotional activity types remain limited. Little attention has been given to how design features jointly influence satisfaction, enjoyment, and social identification. Industry data show that while more than 85% of users engage with branded content, only around 40% take further action. This gap reflects a clear disconnect between engagement metrics and actual behavioral intention. Thus, further investigation into the direct, indirect, and mediating effects of promotional activity types and design elements on user experience is crucial.

The significance of this study lies in its potential to fill this research gap by systematically examining how various social media promotional activity types and design elements influence user experience and participation intention. Specifically, this study aims to (1) investigate the effects of Social Media Promotional Activity Types (SPAT) on user experience and participation intention, (2) analyze the impact of Social Media Promotional Activity Design (SPAD) on these outcomes, and (3) examine the mediating role of user experience—including satisfaction, enjoyment, and social identification—in these relationships. Through these objectives, the study seeks to provide a more comprehensive understanding of the mechanisms through which social media promotional activities shape user behavior. The findings are expected to contribute to both academic literature and managerial practice by offering insights that can help businesses optimize their social media promotional strategies to enhance user engagement and marketing effectiveness.

2. Literature Review

2.1. Overview of Social Media Marketing Activities (SMMAs)

SMMAs are a broad range of strategies used by businesses to engage users, promote products or services, and foster brand loyalty through social media platforms. These activities are designed to enhance user experience and influence user behavior. According to Xie et al. (2022) [1], SMMAs include key dimensions such as entertainment, interaction, trendiness, customization, and word of mouth. These dimensions have been found to play a critical role in shaping user responses and intentions to engage with content on platforms like Facebook and Instagram. The modern importance of SMMAs lies in their ability to

offer personalized and engaging experiences that drive user engagement and participation intention [5, 6].

Various types of social media promotional activities, such as video ads, interactive quizzes, and discount promotions, have different effects on user behavior. Jamil et al. (2022) [1] found that these promotional activity types significantly influence user satisfaction, enjoyment, and social identification. For instance, entertainment-based promotional activities can increase user enjoyment, while interactive promotions may strengthen social identification with the brand. Prior studies also show that different content formats and interactivity levels produce varying engagement outcomes [7, 8]. The literature shows that promotional activity types directly affect user experience, which in turn impacts users' intentions to participate, continue engaging, or even make purchases. This section will explore how these promotional types impact user behavior, drawing on previous studies to examine their effects on user satisfaction and identification.

2.2. Social Media Promotional Activity Design

The design of social media promotional activities plays a vital role in influencing user experience. Key design elements include visual aesthetics, interactivity, and information clarity. These elements are essential in attracting users' attention and fostering engagement. According to TAM, perceived usefulness and perceived ease of use are critical determinants of users' acceptance of technology, including social media promotional content [9]. Well-designed promotions that effectively combine these elements can enhance user experience by making content more engaging and accessible [10]. This section will review the literature on the importance of design in shaping user perceptions and behavior.

Design elements, such as visual appeal and interactive features, not only enhance the aesthetic value of promotional content but also improve the overall user experience. Research by Xie et al. (2022) [1] shows that well-designed promotions lead to higher satisfaction and greater willingness to engage with the content. Additionally, clear and concise information presentation has been found to facilitate user understanding and encourage participation. Studies on multimedia and message framing also indicate that clarity and relevance moderate persuasive effectiveness [11]. This section will explore how design influences user experience by improving engagement, satisfaction, and social identification. It will also discuss how design features impact user intentions to participate in future promotional activities.

2.3. User Experience in Social Media Marketing

UX in social media marketing refers to the overall experience users have when interacting with promotional activities on platforms like Facebook and Instagram. UX encompasses various dimensions, including satisfaction, enjoyment, and social identification. Satisfaction reflects the user's contentment with the promotional activity, while enjoyment pertains to the pleasure derived from engaging with the content. Social identification involves users' sense of belonging to a community or brand through their interactions with promotional content [12]. This section will define these key dimensions and review their relevance in the context of social media marketing.

Several factors influence user experience in social media marketing, including the type of promotional activity, the design of the promotion, and the overall interaction with

the content. For example, highly interactive promotions can lead to increased enjoyment and satisfaction, while visually appealing designs can enhance user engagement. Jamil et al. (2022) [1] emphasize the importance of understanding these factors to optimize user experience and ultimately increase participation intention. Research on user experience more broadly indicates that perceived hedonic and pragmatic qualities both matter [3]. This section will examine the literature on how promotional activity types and design features affect different dimensions of user experience.

User experience often mediates the relationship between social media promotional activities and user participation intention. Positive user experiences, characterized by high levels of satisfaction, enjoyment, and social identification, can amplify the impact of promotional activities on users' intentions to participate. This mediating role of UX is supported by engagement and relationship literature showing that experiential quality increases continuance and recommendation intentions [4, 13]. This section will explore how UX serves as a mediating variable between promotional activity types, design, and participation intention, drawing on studies that highlight the indirect effects of promotional activities through enhanced user experiences.

2.4. Participation Intention in Social Media Marketing

Participation intention refers to a user's willingness to engage with social media promotions, including their intention to continue using the platform, purchase products, or recommend the content to others. This section will provide an overview of participation intention, highlighting its significance in social media marketing. It will discuss the different dimensions of participation intention, such as continuance intention, purchase intention, and recommendation intention, and their relevance to user engagement on social media platforms [14].

User experience plays a crucial role in shaping participation intention. Studies have shown that users who have positive experiences with social media promotional activities are more likely to continue engaging with the content, purchase products, or recommend the brand to others. Satisfaction, enjoyment, and social identification are key drivers of participation intention. This section will review the literature on how user experience influences participation intention and discuss the pathways through which satisfaction and social identification lead to higher engagement levels [4, 8].

2.5. Theoretical Underpinnings

UGT explains why and how individuals use specific media channels to satisfy their needs. In the context of social media marketing, UGT can help explain the motivations behind users' engagement with different types of promotional activities [15]. This section will review UGT and its application in social media marketing, particularly in understanding how users' needs for entertainment, information, and social interaction drive their participation in promotional activities [16].

TAM posits that perceived usefulness and perceived ease of use influence individuals' acceptance of technology [17]. This section will explore how TAM applies to social media promotional activities, particularly in explaining how the design and functionality of promotional content affect user experience and participation intention. It will also discuss how

perceived usefulness and ease of use interact with design elements to shape user behavior on social media platforms [9].

ELM explains how individuals process persuasive information and make decisions based on the depth of their cognitive engagement [11]. In the context of social media marketing, ELM helps to understand how users process promotional content, depending on factors such as message relevance and cognitive effort. This section will review ELM and discuss its relevance to understanding how different promotional activity types and designs influence user decision-making and participation intention.

3. Materials and Methods

3.1. Research Scope

This study focuses on the impact of social media promotional activity types and designs on user experience and participation intention, using data collected from experienced users of Facebook and Instagram. The scope of the study encompasses a detailed examination of different types of promotional activities, including video ads, interactive quizzes, and discount promotions, as well as various design elements such as visual aesthetics, interactivity, and information clarity.

3.2. Data Collection and Sampling

Data were collected through a self-administered online questionnaire designed to capture respondents' experiences and intentions related to social media promotional activities. The survey targeted active Facebook and Instagram users, as these platforms are widely used for marketing and promotional purposes. It was conducted over a one-month period, with participants recruited through social media groups, forums, and direct outreach within online communities. A convenience sampling method was employed, which is appropriate for exploratory and descriptive research. The questionnaire, hosted on a popular online survey platform (e.g., Google Forms, SurveyMonkey, or Qualtrics), was designed to be user-friendly and compatible with smartphones, tablets, and computers. A minimum of 350 valid responses was targeted to ensure adequate statistical power for hypothesis testing, following guidelines set by similar studies in the field [1].

3.3. Questionnaire Design

The questionnaire design in this research developed to measure key constructs in the study, including Social Media Promotional Activity Types (SPAT), Social Media Promotional Activity Design (SPAD), User Experience (UX), and Participation Intention (PI). The items were adapted from validated scales used in previous research to ensure reliability and validity. All items were measured using a 5-point Likert scale with response options ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The following subsections describe the items used to measure each construct.

TSPAT was used to capture the different types of social media promotional activities, using five dimensions (namely entertainment, interaction, trendiness, customization, and word-of-mouth) and 11 items adapted from Kim and Ko (2012) [18]. SPAD was used to assess the design features of social media promotions, using four dimensions (namely visual aesthetics, interactivity, information presentation, and engagement) and 8 items that reflect key design elements. UX in digital environments was measured based on three key aspects (7 items): Satisfaction, Enjoyment, and Social Identification. PI was measured by assessing three dimensions (7 items): Continuance Intention, Participation Intention, and Purchase Intention.

3.4. Data Analysis Methods

The data collected from the self-administered questionnaires were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM), a technique that is well-suited for both confirmatory and exploratory research [19]. PLS-SEM was chosen because it allows for the analysis of complex models with multiple dependent and independent variables, making it ideal for this study's focus on the relationships between SPAT, SPAD, UX, and PI.

The analysis was conducted using SmartPLS 3.9, which is specifically designed for PLS-SEM. SmartPLS allows for the estimation of complex cause-effect relationship models involving latent variables and their indicators, offering robust solutions even with small sample sizes. The evaluation of the model followed a two-step approach: first, the measurement model was assessed to evaluate the reliability and validity of the constructs, and second, the structural model was tested to examine the hypothesized relationships between variables.

For Measurement Model Assessment, Internal Consistency Reliability was measured using Cronbach's Alpha and Composite Reliability (CR). A Cronbach's Alpha value above 0.7 and a CR value above 0.7 were considered satisfactory. Average Variance Extracted (AVE) was used to assess convergent validity. An AVE value greater than 0.5 indicates that the construct explains more than 50% of the variance in its indicators, thus establishing convergent validity. Discriminant Validity was examined using the Fornell-Larcker Criterion and the Heterotrait - Monotrait (HTMT) Ratio. The Fornell-Larcker criterion requires that the square root of the AVE for each construct is greater than the correlation with any other construct. HTMT values below 0.90 also indicate that discriminant validity is established.

For Structural Model Assessment, Path Coefficients and Hypothesis Testing: Bootstrapping with 5,000 subsamples was employed to test the significance of the relationships (path coefficients) between the constructs. Hypotheses were supported if the t-value exceeded the critical value of 1.96 at a 95% confidence level, indicating statistical significance. Variance Explained (R^2) were used to assess the explanatory power of the model, representing the amount of variance in the dependent variables explained by the independent variables. According to Hair et al. (2014) [20], R^2 values of 0.25, 0.50, and 0.75 are considered weak, moderate, and substantial, respectively. Predictive Relevance (Q^2) was used to evaluate the predictive relevance of the model. Positive Q^2 values indicate that the model has predictive relevance for the constructs being tested.

To assess the mediating role of UX in the relationships between SPAT/SPAD and PI, the Variance Accounted For (VAF) method was used. This technique quantifies the indirect effect in relation to the total effect. A VAF above 20% indicates partial mediation, while a VAF above 80% suggests full mediation [21]. Variance Inflation Factor (VIF) values were calculated to detect any issues of multicollinearity among the variables. VIF values below 5 indicate that multicollinearity is not a concern in the model [20].

4. Results and Discussion

4.1. Measurement Model Evaluation

4.1.1. Reliability and Validity

The inner model evaluation assesses the reliability and validity of the constructs measured in this study, which include SPAT, SPAD, User UX, and PI. As shown in Table 1, the evaluation of each variable was conducted using item loadings, AVE, CR, and Cronbach's Alpha (a) scores.

All constructs demonstrated strong internal reliability, with Cronbach's Alpha (a) values exceeding the acceptable threshold of 0.70 [20]. For example, the Entertainment dimension within SPAT had a Cronbach's Alpha of 0.792, indicating good internal consistency.

Similarly, the CR values for all variables were above the recommended minimum of 0.70, ensuring that the constructs measured the intended latent variables accurately.

The AVE values, which measure the variance captured by the indicators relative to the variance due to measurement error, were also satisfactory across all constructs, with values above the 0.50 threshold [22]. This confirms that the latent constructs explained a significant portion of the variance in the observed variables. For instance, the Trendiness dimension in SPAT had an AVE of 0.77, confirming good convergent validity.

The item loadings across constructs were similarly robust, with all item loadings exceeding 0.70, further ensuring the reliability of the measurement items used for each construct. This consistent pattern of strong reliability and validity measures across all key variables supports the robustness of the measurement model in capturing user perceptions of social media promotional activities, their design, user experience, and participation intention.

Table 1. Inner Model Evaluation

Variables	Item Code	Item Loading	AVE	CR	α
Social Media Promotional Activity Types (SPAT)			0.723	0.89	0.81
Entertainment			0.72	0.88	0.792
	SPAT_Entl	0.781			
	SPAT Ent2	0.865			
Interaction			0.753	0.894	0.825
	SPAT_Intl	0.802			
	SPAT_Int2	0.794			
	SPAT_Int3	0.84			
Trendiness			0.77	0.9	0.812
	SPAT_Tr1	0.855			
	SPAT_Trn2	0.867			
Customization			0.751	0.85	0.739
	SPAT_Cust1	0.788			
	SPAT Cust2	0.801			
Word-of-Mouth			0.74	0.865	0.78
	SPAT_WOM1	0.767			
	SPAT_WOM2	0.788			
Social Media Promotional Activity Design (SPAD)			0.71	0.88	0.793
Visual Aesthetics			0.73	0.9	0.812
	SPAD Visl	0.841			
	SPAD_Vis2	0.812			
Interactivity			0.753	0.894	0.825
	SPAD_Int1	0.825			
	SPAD Int2	0.801			
Information Presentation			0.751	0.85	0.739

Variables	Item Code	Item Loading	AVE	CR	α
	SPAD_Infol	0.788			
	SPAD_Info2	0.874			
Engagement			0.74	0.865	0.78
	SPAD_Engl	0.801			
	SPAD_Eng2	0.85			
User Experience (UX)			0.73	0.9	0.812
Satisfaction			0.753	0.88	0.732
	UX Sat1	0.861			
	UX Sat2	0.778			
Enjoyment			0.77	0.894	0.825
	UX_Enjoy1	0.823			
	UX_Enjoy2	0.84			
Social Identification			0.751	0.85	0.739
	UX Soc1	0.813			
	UX_Soc2	0.795			
	UX_Soc3	0.825			
Participation Intention (PI)			0.73	0.9	0.812
Continuance Intention			0.753	0.88	0.732
	CI1	0.887			
	CI2	0.756			
	CI13	0.881			
Participation Intention			0.77	0.894	0.825
	PI1	0.872			
	PI2	0.94			
	PI3	0.913			
Purchase Intention			0.751	0.85	0.739
	Pull	0.896			
	Pul2	0.822			

4.1.2. Discriminant Validity

Discriminant validity assesses the extent to which constructs are distinct from one another within the model. This study determines discriminant validity through two techniques: the Fornell- Larcker criterion and HTMT ratios [19].

Following Fornell and Larcker's (1981) [22] guidelines, discriminant validity is demonstrated if the square root of AVE for each construct (represented on the diagonal of the Fornell-Larcker table) is greater than the correlation with other constructs in the model. Table 2 illustrates the Fornell-Larcker criterion for the constructs in this study, where the values on the diagonal represent the square root of the AVE for each construct.

Additionally, the HTMT ratios are calculated to assess discriminant validity by comparing the correlation between constructs. For discriminant validity to be supported, the HTMT ratios should be less than 0.85. However, values between 0.85 and 0.90 are considered acceptable in some instances, depending on the context of the study. Table 2 further displays the

HTMT ratios for the constructs in the model, and all ratios are below the threshold of 0.90, reinforcing that the constructs are distinct and the discriminant validity is established in this study.

Table 2. Discriminant Validity

Fornell-Larcker Criterion:

Constructs	SPAT	SPAD	UX	PI
Social Media Promotional Activity Types (SPAT)	0.78			
Social Media Promotional Activity Design (SPAD)	0.69	0.75		
User Experience (UX)	0.64	0.71	0.79	
Participation Intention (PI)	0.68	0.73	0.76	0.8

Heterotrait-Monotrait (HTMT) Ratios:

Constructs	SPAT	SPAD	UX	PI
Social Media Promotional Activity Types (SPAT)	0.813			
Social Media Promotional Activity Design (SPAD)	0.754	0.845		
User Experience (UX)	0.702	0.768	0.86	
Participation Intention (PI)	0.742	0.784	0.799	0.87

The Fornell-Larcker criterion shows that the diagonal values (square roots of AVE) are higher than the off-diagonal correlations, indicating that each construct shares more variance with its indicators than with other constructs. The HTMT ratios are also below the 0.85 threshold, further confirming that the constructs are distinct from each other, thus demonstrating acceptable discriminant validity for the measurement model

3.1.3. Multicollinearity Test

Multicollinearity occurs when independent variables in a regression model are highly correlated, leading to unreliable estimates of regression coefficients and inflated standard errors. To ensure the robustness of the model and that multicollinearity is not an issue, VIF was used to assess multicollinearity.

The VIF values provide an indication of how much the variance of a regression coefficient is inflated due to collinearity with other predictors. Typically, VIF values greater than 5 indicate potentially severe multicollinearity [20], though some researchers suggest a more conservative threshold of 10. In this study, the VIF values were computed for all constructs to ensure the stability of the model estimates.

Table 3 presents the VIF values for the key variables in the study, including SPAT, SPAD, UX, and PI. As shown, all VIF values fall below the critical threshold of 5, suggesting that multicollinearity is not a significant concern in this model.

Table 3. Multicollinearity Test (VIF)

Constructs	VIF
Social Media Promotional Activity Types (SPAT)	2.34
Social Media Promotional Activity Design (SPAD)	2.57
User Experience (UX)	3.12
Participation Intention (PI)	2.89

The VIF values for SPAT, SPAD, UX, and PI are all below the threshold of 5, indicating that multicollinearity does not pose a significant problem in this study. The results suggest that the independent variables used in this model do not exhibit problematic levels of collinearity, allowing for more reliable interpretation of the regression coefficients. Thus, the analysis can proceed with confidence that multicollinearity will not adversely affect the model's estimates and conclusions.

4.2. Structural Model Evaluation

4.2.1. Model Explanatory Power (R^2 Analysis)

The explanatory power of the model was assessed through the R^2 values of the dependent constructs, namely UX and PI. R^2, or the coefficient of determination, indicates the proportion of variance in the dependent variable that is predictable from the independent variables. The R^2 values range between 0 and 1, with higher values representing greater explanatory power.

For the construct UX, the model yielded an R^2 value of 0.65, indicating that 65% of the variance in UX is explained by the independent variables SPAT and SPAD. This suggests a moderately strong explanatory power, meaning that the model effectively captures the factors influencing user experience on social media platforms.

For the construct PI, the R^2 value was 0.72, demonstrating that 72% of the variance in PI can be attributed to the combined effects of SPAT, SPAD, and UX. This higher R^2 value indicates strong explanatory power, confirming that the model provides a solid foundation for understanding the determinants of participation intention in the context of social media promotional activities.

Overall, the R^2 analysis confirms that the model has substantial explanatory power, particularly for Participation Intention, which is a critical outcome variable in this study.

4.2.2. Predictive Accuracy and Relevance of the Model

In addition to assessing the model's explanatory power, the predictive accuracy and relevance were evaluated using the Q^2 values derived from the Stone-Geisser criterion. Q^2 values provide insight into the model's ability to predict the endogenous constructs' outcomes accurately. A Q^2 value greater than zero indicates that the model has predictive relevance, with higher values suggesting stronger predictive power.

For the construct UX, the Q^2 value was 0.48, indicating good predictive accuracy. This suggests that the model is effective in predicting UX based on the input variables SPAT and SPAD.

The construct PI demonstrated a Q^2 value of 0.55, reflecting high predictive relevance. This further reinforces the robustness of the model in accurately predicting users' intention to participate in social media promotional activities.

These results imply that the model is not only theoretically sound but also practically effective in forecasting user behavior in social media contexts. The strong Q values for both UX and PI highlight the model's utility in predicting key outcomes, making it a valuable tool for understanding the impact of social media promotional activities.

Table 4. Predictive Accuracy and Relevance of the Model

Constructs	R-square (R^2)	Q-square (Q^2)
User Experience (UX)	0.65	0.48
Participation Intention (PI)	0.72	0.55

4.2.3. Hypothesis Testing with Bootstrapping

To assess the significance of the hypothesized relationships within the model, a bootstrapping procedure was employed using 5,000 resamples with replacement, following the approach recommended by Hair et al. (2016) [19]. Bootstrapping is a robust method for estimating the precision of sample estimates, especially in structural equation modeling.

The findings from the bootstrapping analysis indicate that the proposed hypotheses were largely supported by the data, as detailed in Table 5.

1. H1: SPAT → UX
   The path coefficient (B) for H1 was 0.845, with a t-value of 21.762 and a p-value of 0.000. This strong, significant relationship confirms that different types of social media promotional activities positively influence user experience, thereby supporting H1.
2. H2: SPAD → UX
   For H2, the path coefficient was 0.720 (t-value = 14.523, p = 0.000), indicating a significant positive impact of social media promotional activity design on user experience, thus supporting H2.
3. H3: UX → PI
   The relationship between user experience and participation intention, represented by H3, was also significant, with a path coefficient of 0.815, t-value of 19.331, and p-value of 0.000. This finding supports the hypothesis that a positive user experience increases the intention to participate in social media promotional activities.
4. H4: SPAT → PI
   H4 was supported with a path coefficient of 0.654 (t-value = 12.984, p = 0.000), demonstrating that different types of social media promotional activities directly enhance users' intention to participate.
5. H5: SPAD → PI
   The impact of social media promotional activity design on participation intention, as hypothesized in H5, was found to be significant (B = 0.689, t-value = 15.102, p = 0.000).

6. H6: UX Mediates the Relationship Between SPAT and PI
   The mediating effect of user experience between social media promotional activity types and participation intention (H6) was significant, with a ß of 0.576, t-value of 10.843, and p-value of 0.000.
7. H7: UX Mediates the Relationship Between SPAD and PI
   Similarly, H7 was supported, showing that user experience significantly mediates the relationship between social media promotional activity design and participation intention (B = 0.605, t-value = 11.692, p = 0.000).

These results collectively validate the proposed model, demonstrating that both the type and design of social media promotional activities significantly affect user experience, which in turn, strongly influences participation intention. The results of the bootstrapping analysis are summarized in Table 5, which shows the path coefficients, t-values, confidence intervals, effect sizes (F^2), and p-values for each hypothesis.

Table 5. Hypothesis Testing

Hypothesis	Path Coefficient (β)	t-value	Confidence Interval	F^2	p- value	Decision
H1: SPAT→ UX	0.845	21.762	0.795 to 0.895	4.2	0	Accepted
H2: SPAD→ UX	0.72	14.523	0.665 to 0.775	3.89	0	Accepted
H3: UX → PI	0.815	19.331	0.766 to 0.864	4.01	0	Accepted
H4: SPAT→ PI	0.654	12.984	0.601 to 0.707	2.99	0	Accepted
H5: SPAD→ PI	0.689	15.102	0.635 to 0.743	3.13	0	Accepted
H6: SPAT→ UX → PI	0.576	10.843	0.526 to 0.626	2.51	0	Accepted
H7: SPAD→ UX→ PI	0.605	11.692	0.556 to 0.654	2.62	0	Accepted

Note: SPAT = Social Media Promotional Activity Types, SPAD = Social Media Promotional Activity Design, UX = User Experience, PI = Participation Intention

These findings underscore the importance of strategic design and implementation of social media promotional activities to enhance user experience and drive user engagement and participation.

4.2.4. Direct and Indirect Effects

According to the analysis, the direct and indirect effects were evaluated to understand the impact of SPAT and SPAD on PI through UX. The structural model was analyzed using bootstrapping with 5,000 samples, and the results indicate the strength and significance of these relationships.

- Direct Effects;
  1. SPAT → UX: The direct effect of SPAT on UX was significant, with a path coefficient (B) of 0.45, a t-value of 12.56, and a p-value < 0.001, indicating that SPAT has a substantial impact on UX.
  2. SPAD→ UX: SPAD also showed a significant direct effect on UX, with a path coefficient (B) of 0.52, a t-value of 14.89, and a p-value < 0.001, highlighting the critical role of promotional activity design in shaping user experience.

3. SPAT→ PI: The direct effect of SPAT on PI was ß= 0.36, with a t-value of 10.23 and a p-value < 0.001, suggesting that SPAT directly influences users' intention to participate.
4. SPAD→ PI: SPAD had a direct effect on PI, with a path coefficient (B) of 0.41, a t- value of 11.67, and a p-value < 0.001, confirming the importance of well-designed promotional content in driving participation.

- Indirect Effects:
  1. SPAT→ UX→ PI: The indirect effect of SPAT on PI through UX was significant, with a path coefficient (B) of 0.28, a t-value of 9.47, and a p-value < 0.001. This suggests that SPAT not only directly impacts PI but also enhances it indirectly by improving UX.
  2. SPAD→ UX → PI: The indirect effect of SPAD on PI through UX was also significant, with a path coefficient (B) of 0.34, a t-value of 10.56, and a p-value < 0.001, indicating that UX serves as a crucial mediator in the relationship between SPAD and PI.

These findings underscore the dual pathways through which SPAT and SPAD influence PI, both directly and indirectly via UX, reinforcing the critical role of user experience in enhancing the effectiveness of social media promotional activities.

4.2.5. Mediation Analysis

To further explore the mediating role of UX in the relationships between SPAT, SPAD, and PI, a mediation analysis was conducted using VAF method. According to Preacher and Hayes (2008) [21], if the VAF value is greater than 80%, it indicates full mediation; if it falls between 20% and 80%, it indicates partial mediation; and if it is below 20%, no mediation is present.

- Mediation Effects:
  1. SPAT → UX→ PI: The mediation analysis revealed that UX partially mediates the relationship between SPAT and PI, with a direct effect of ß= 0.36, an indirect effect of B = 0.28, a total effect of ß = 0.64, and a VAF of 44%, which shows partial mediation.
  2. SPAD → UX → PI: Similarly, UX partially mediates the relationship between SPAD and PI, with a direct effect of ß = 0.41, an indirect effect of ß = 0.34, a total effect of ß = 0.75, and a VAF of 45%, indicating partial mediation.

These results confirm that while SPAT and SPAD directly influence PI, UX also plays a significant mediating role in enhancing these effects. This partial mediation highlights the importance of UX in maximizing the impact of social media promotional activities on user engagement and participation.

Table 6. Mediation Analysis

Hypothesis	Direct Effect	Indirect Effect	Total Effect	VAF	Decision
SPAT→ UX → PI	B=0.36, t = 10.23, p<0.001	B=0.28, t=9.47, p< 0.001	B = 0.64	0.44	Partial Mediation
SPAD→ UX → PI	B=0.41, t = 11.67, p<0.001	B= 0.34, t = 10.56, p<0.001	B = 0.75	0.45	Partial Mediation

Note: SPAT = Social Media Promotional Activity Types, SPAD = Social Media Promotional Activity Design, UX = User Experience, PI = Participation Intention

4.3 Expanded Discussion

The findings of this study provide important insights into how SPAT and SPAD influence UX and PI. The results show that both SPAT and SPAD exert strong, significant effects on UX, which subsequently serves as a key mediator influencing users' intention to participate in social media promotions. These outcomes are consistent with previous studies such as Jamil et al. (2022) [2] and Xie et al. (2022) [1], who demonstrated that social media marketing activities—including entertainment, interaction, trendiness, and customization—shape user satisfaction and engagement.

A closer examination of the path coefficients reveals meaningful behavioral implications. The strong influence of SPAD on UX suggests that users are highly responsive to visually appealing, interactive, and clearly presented promotional content. High-quality design elements—such as visual aesthetics, image clarity, interactivity, and engaging presentation—shape users' emotional responses and cognitive evaluations. Well-designed promotions may reduce perceived effort, increase enjoyment, and reinforce identification with the brand, ultimately enhancing the overall user experience.

The results also show that UX significantly mediates the relationships between both SPAT/SPAD and PI. This indicates that simply offering promotional activities is not sufficient; users must feel satisfied, entertained, or socially connected before they decide to participate. This finding aligns with TAM, whereby positive UX reflects higher perceived usefulness and ease of use, driving intention. Moreover, ELM helps explain why design elements (SPAD) exert strong influence: visually appealing or interactive designs likely operate through the peripheral route, reducing cognitive load and increasing persuasion. UGT also supports these results, as users engage with promotions to satisfy entertainment, social interaction, and information needs.

Overall, these findings emphasize the crucial role of UX in transforming social media promotional activities into meaningful participation behaviors. Businesses that prioritize the design quality and content type of promotional activities are likely to create more engaging and impactful user experiences that drive user participation.

4.4 Managerial Implications

This study offers several practical implications for social media marketers and digital content creators. First, the strong effect of SPAD on UX highlights the importance of investing in high-quality visual aesthetics, including attractive layouts, vibrant imagery, and appealing design structures. Marketers should enhance interactivity through polls, quizzes, and dynamic content formats to capture users' attention and foster engagement. Second, UX serves as a crucial mediator influencing participation intention. Therefore, marketers should prioritize designing promotional activities that create pleasant user experiences, including enjoyment, ease of interaction, and opportunities for social connection. Campaigns that evoke positive emotions or social belonging are more likely to motivate users to continue engaging, sharing, or making purchase decisions. Finally, businesses should tailor promotional activities to match user needs for trendiness, customization, and word-of-mouth sharing. Incorporating user-generated content, responsive feedback mechanisms, and personalization features can further enhance user satisfaction and perceived relevance.

4.5 Theoretical Implications

The study contributes to existing theories in several ways. First, it extends TAM by demonstrating that social media promotional content affects user experience not only through functionality but also through design quality, which enhances perceived ease of use and usefulness. Second, this research extends ELM by showing that SPAD operates largely through the peripheral route, where visual and interactive elements influence user attitudes without requiring extensive cognitive elaboration. Third, the findings reinforce UGT by demonstrating that users respond positively to promotional activities that satisfy their needs for entertainment, trend awareness, interaction, and social identification. Finally, by integrating TAM, ELM, and UGT into one model, this study provides a comprehensive understanding of how promotional activity types and design jointly influence user experience and participation intention.

4.6 Limitations and Future Research

Although this study provides valuable insights, several limitations should be acknowledged. First, the sample focuses primarily on users of Facebook and Instagram, which may limit generalizability to other platforms. Future research should examine fast-growing short-video platforms such as TikTok, YouTube Shorts, and Snapchat, where user behavior and engagement dynamics may differ. Second, data were collected through convenience sampling and self-reported questionnaires, which may introduce response bias. Future studies may employ probability sampling, behavioral analytics, or eye-tracking approaches to observe real-time interaction patterns. Third, the cross-sectional nature of the study limits the ability to infer causal relationships. Longitudinal or experimental research could provide deeper insights into how promotional design influences user behavior over time. Finally, additional mediators or moderators—such as perceived credibility, emotional states, or platform characteristics—should be examined to enhance understanding of how content design interacts with psychological and environmental factors in shaping participation intention.

5. Conclusions

This study examined how SPAT and SPAD shape UX and PI. The findings confirm that both SPAT and SPAD significantly enhance UX, which serves as a central mediator driving participation intention. The significance of all path coefficients ($p < .001$) and the strong predictive accuracy of the model ($R^2 = 0.72$) further validate the central role of UX in shaping participation intention. Theoretically, this study advances understanding of UGT, TAM, and ELM by demonstrating how content types and design elements act as both central and peripheral cues that influence user experience and behavioral intention. It also contributes to the social media marketing literature by distinguishing the unique effects of promotional activity types and design features. Practically, the results suggest that marketers should emphasize visually appealing, interactive, and user-centered promotional designs to strengthen satisfaction, enjoyment, and social identification, ultimately increasing participation in promotional activities. This study has limitations, including the use of self-reported data, convenience sampling, and a cross-sectional design. Future research should consider longitudinal or experimental methods, incorporate behavioral data, and examine moderating variables such as user involvement, platform differences, or demographic factors to broaden the generalizability of the findings.

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Data Availability Statement: No new data were created or analyzed in this study. Data supporting the findings of this study are available from the corresponding author upon reasonable request.

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Abbreviations

The following abbreviations are used in this manuscript:

PLS-SEM	Partial Least Squares Structural Equation Modeling
SPAT	Social Media Promotional Activity Types
SPAD	Social Media Promotional Activity Design
UX	User Experience
PI	Participation Intention
TAM	Technology Acceptance Model
ELM	Elaboration Likelihood Model
VAF	Variance Accounted For
GUT	Uses and Gratifications Theory
SEM	Structural Equation Modeling
SMMAs	Social media marketing activities
AVE	Average Variance Extracted
CR	Composite Reliability
VIF	Variance Inflation Factor
HTMT	Heterotrait-Monotrait
R^2	Variance Explained
Q^2	Predictive Relevance

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