



Exploring How Interactivity and Livestream Performance Shape Perceived Livestream Quality and Purchase Intention in TikTok Commerce

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ABSTRACT

Livestream commerce is rapidly expanding among Malaysian youths, especially teenagers who value interactive and engaging digital experiences. However, limited empirical research explains how interactivity and livestream performance influence livestream perceived quality and purchase intention in this context. This study tests a mediation model where Interactivity and Livestream Performance predict Livestream Perceived Quality, which subsequently drives Purchase Intention in TikTok livestream commerce. Data were collected from 284 teenagers who actively participate in TikTok livestream shopping and analysed using SEM-AMOS. All constructs demonstrated strong reliability and validity, with excellent model fit indices. Results show that interactivity and livestream performance significantly enhance livestream perceived quality, which in turn positively affects purchase intention. Mediation analysis confirms livestream perceived quality as a key mechanism linking experiential factors to purchase intention. Thus, this study advances livestream commerce research and highlights the importance of interactive design and value-rich content in engaging Malaysian youth and teen consumers.

Keywords: interactivity, livestream, perceived livestream quality, purchase intention

BACKGROUND OF THE STUDY

Livestream commerce has transformed the digital retail environment, integrating entertainment, real-time communication, and immediate purchasing opportunities. Live streamers provide product knowledge and related information during the livestream sessions, which can persuade viewers' decision of product purchase while interacting with their live audience. In Malaysia, this trend is accelerating among youths, particularly teenagers who spend significant time on platforms such as TikTok. Teens are highly responsive to immersive, interactive, and engaging digital experiences, making livestreaming a persuasive marketing tool.

PROBLEM STATEMENT

Existing livestream commerce research largely examines adult consumers or generalized populations, leaving an important knowledge gap about how experiential factors shape the behaviour of younger digital natives. However, empirical studies focusing on Malaysian teenagers remain scarce. Specifically, little is known about how interactivity and livestream performance contribute to teenagers' perceived livestream quality and subsequent purchase intention.

This study aims to fill this gap by examining a mediation model involving interactivity, livestream performance, perceived livestream quality, and purchase intention in TikTok livestream commerce.

LITERATURE REVIEW

Interactivity

Interactivity reflects the degree to which users can participate, provide input, and receive immediate responses in real-time online environments (Liu & Shrum, 2002). In livestream commerce, interactive features such as live chat, polls, and instant customer-seller communication enhance users' engagement, reduce uncertainty, and improve trust (Sun et al., 2019). For teenagers, these features create a sense of social presence and involvement that strengthens their evaluation of the shopping experience.

Livestream Performance

Livestream performance refers to the effectiveness of the host in delivering engaging, informative, and entertaining content. High-performing streamers demonstrate credibility, product knowledge, and charismatic presentation skills (Park & Lin, 2020). Livestream performance can reduce ambiguity, improve perceived usefulness, and shape consumers' attitudes toward both the content and the seller.

Perceived Livestream Quality

Perceived quality is consumers' overall assessment of the livestream experience, including clarity, credibility, completeness, and value. Quality perceptions strongly influence satisfaction and behavioural intentions in digital commerce (Parasuraman et al., 2005). In livestream settings, perceived quality integrates both technological and experiential factors.

Purchase Intention in TikTok Livestream Commerce

Purchase intention reflects the consumer's likelihood of buying a product during or after the livestream. Teenagers' purchase intentions are shaped by affective responses, peer influence, and the entertainment value of the livestream environment (Chen & Lin, 2018).

Mediation Role of Perceived Quality

The Stimulus–Organism–Response (S-O-R) model (Mehrabian & Russell, 1974) suggests that external stimuli (interactivity and performance) influence internal states (perceived quality), which drive behavioural outcomes (purchase intention). This study proposes that perceived livestream quality mediates the effects of interactivity and livestream performance on purchase intention. The SOR model provides a theoretical and conceptual foundation for developing the relationship between the variables of the study.

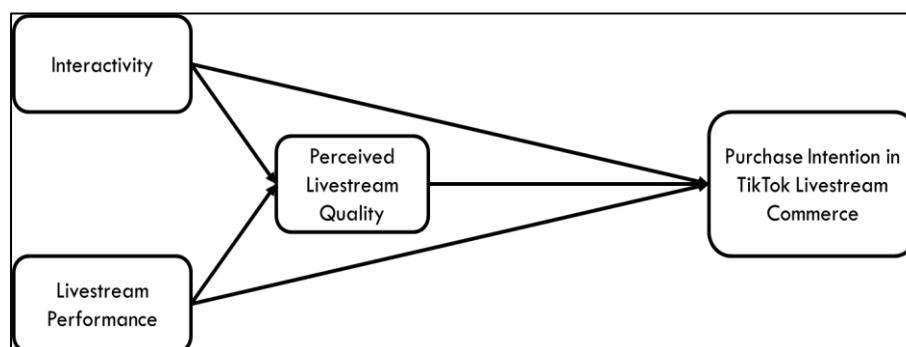


Figure 1: Theoretical framework

Figure 1 shows a mediation model that explains how two key livestream factors, interactivity and livestream performance shape consumers' purchase intention in TikTok Commerce through the mediating influence of perceived livestream quality. The research framework has been established with the theoretical foundation of stimulus organism response (SOR) model which elaborates the influence of external factors on the organism and ultimately results in an outcome such as purchase intention.

Interactivity captures the degree of real-time engagement between the streamer and audience, such as responding to comments, Q&A sessions, or live reactions, which enhances viewers' overall perception of livestream quality. Similarly, livestream performance, reflected through presentation skills, clarity of product explanation, entertainment value, and professionalism, also contributes to higher perceived quality. When viewers judge a livestream as high-quality engaging, informative, and trustworthy they are more likely to develop stronger purchase intentions. In this model, perceived livestream quality acts as a crucial mediator that explains how and why interactivity and livestream performance indirectly lead to increased purchase intention by elevating viewers' perceptions of the livestream experience.

HYPOTHESES DEVELOPMENT

The following hypotheses has been developed based on the literature review and the theoretical foundation:

H1: Interactivity exerted a positive effect on perceived livestream quality

H2: Livestream performance also improved perceived livestream quality

H3: Perceived livestream quality strongly predicted purchase intention

H4: Interactivity exerted a positive effect on purchase intention

H5: Livestream performance exert a positive effect on purchase intention

H6: Livestream Perceived Quality mediates the relationship between Interactivity and Purchase Intention

H7: Livestream Perceived Quality mediates the relationship between Livestream Performance and Purchase Intention

METHODOLOGY

This study adopted a quantitative cross-sectional design to explore the relationships between interactivity, livestream performance, perceived livestream quality, and purchase intention among Generation Z TikTok users in Kedah. A survey method was employed because it is commonly used in consumer and digital behaviour research and enables systematic assessment of latent constructs within a single time period. The target population comprised Gen Z consumers in Kedah who actively engage with TikTok shopping content, and purposive sampling was applied to ensure that only users with relevant platform experience were included.

A total of 284 usable responses were collected, representing a sufficient sample size for structural equation modelling. Data were gathered through a structured online questionnaire administered via Google Forms, an efficient tool for reaching digitally active participants. The Google Form questionnaire has shared to the respondents through digital communication apps (like WhatsApp, Messenger, we chat etc). The data collection took place from 5 November to 11 November 2025, and respondents participated voluntarily and anonymously.

FINDINGS

Demographic Profile of Respondents

A total of 284 valid responses were analysed. Female respondents represented 60.2 percent, while males contributed 39.8 percent of the sample. The majority of the respondents were between 18 and 24 years old, indicating that the sample aligns with the digital-native demographic most involved in TikTok usage. Daily TikTok usage patterns showed that many respondents spent more than three hours per day on the platform, demonstrating a high level of immersion consistent with previous findings on Gen Z digital engagement (Rahim et al., 2024).

These demographic patterns reflect the suitability of the sample for examining TikTok-driven purchase intention, as Generation Z is identified as one of the most responsive groups to short video content and livestream commerce (Phan and Nguyen, 2024).

Measurement Model

All four constructs measured in this study, namely Interactivity, Livestream Performance,

Perceived Livestream Quality, and Purchase Intention, demonstrated strong reliability and validity. The composite reliability values for these constructs were all above 0.88, while the average variance extracted values ranged from 0.619 to 0.668 as shown in Figure 2. These results indicate that every construct achieved the accepted standards for internal consistency and convergent validity.

The measurement model also showed a good overall fit. The fit indices met the recommended guidelines, with GFI values between 0.985 and 0.991, CFI values between 0.993 and 0.999, TLI values between 0.987 and 0.997, and RMSEA values between .030 and .066. These indices collectively show that the model fits the data well across all four constructs as depicted in Table 1.

Table 1: *Measurement model*

Construct	AVE	CR
Interactivity	0.647	0.896
Livestream performance	0.668	0.908
Perceived livestream quality	0.623	0.889
Purchase intention	0.619	0.901

Structural Model

The structural model demonstrated an acceptable fit to the data ($\chi^2 = 298.020$, $df = 164$, $\chi^2/df = 1.744$, $GFI = .908$, $CFI = .970$, $TLI = .968$, $RMSEA = .051$). All hypothesized relationships were significant as shown in Table 2.

Interactivity exerted a positive effect on perceived product quality ($\beta = 0.44$), indicating that interactive livestream features enhanced teenagers' evaluation of product attributes. Livestream performance also improved perceived livestream quality, although the magnitude was smaller ($\beta = 0.15$).

Table 2: *Model fit summary*

χ^2	298.020
df	164
χ^2/df	1.744
GFI	.908
CFI	.970
TLI	.968
RMSEA	.051

Perceived livestream quality strongly predicted purchase intention ($\beta = 0.52$), making it the most influential construct in the model. Livestream performance had a modest but significant direct effect on purchase intention ($\beta = 0.16$), suggesting that a smooth and well-executed livestream contributes independently to consumers' intention to purchase.

To examine the validity of the measurement model more closely, confirmatory factor analysis was conducted using AMOS with maximum likelihood estimation. All factor loadings for the items measuring interactivity, livestream performance, perceived livestream quality, and purchase intention exceeded the minimum acceptable level of 0.57 as shown in Figure 2. This confirms that the selected indicators were suitable representatives of each latent variable.

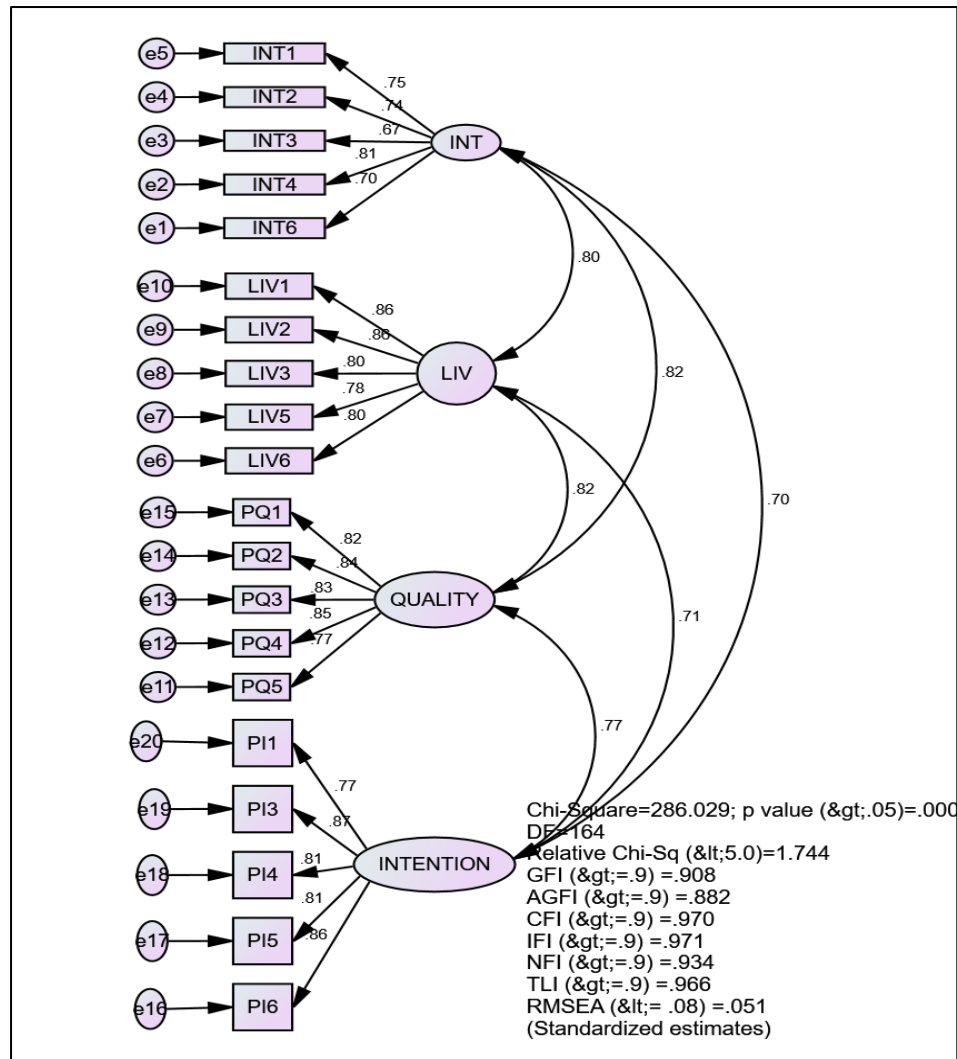


Figure 2: Measurement model

Mediation Effects

Bootstrapping analysis further confirmed that perceived livestream quality functions as a significant mediator in the model as shown in Figure 3. The summary of all the hypotheses are shown in Table 3 which highlights that perceived quality mediates the relationship between interactivity and purchase intention, as well as the relationship between livestream performance and purchase intention, demonstrating its central role in shaping consumer behavioural outcomes.

Perceived livestream quality was examined as a mediating mechanism linking interactivity and livestream performance to purchase intention. The findings reveal two distinct mediation patterns. First, interactivity influenced purchase intention exclusively through perceived livestream quality. The absence of a significant direct path indicates that the mediation is full,

suggesting that interactivity alone is insufficient to drive teenagers' purchase intention. Instead, interactive elements such as real-time responses, engagement cues, and dynamic presentation enhance intention only when they translate into stronger perceptions of product credibility and quality. In other words, interactivity becomes meaningful to consumers when it improves how the product is evaluated.

Second, livestream performance exhibited both direct and indirect effects on purchase intention, indicating partial mediation. While performance quality (e.g., smooth streaming, clear audio-visual delivery, stable connection) contributed to stronger livestream quality perceptions thereby increasing purchase intention it also exerted a direct experiential influence on intention. This means that teenagers may be motivated to purchase not only because the product appears high-quality, but also because the overall livestream experience is professional, seamless, and trustworthy. The dual pathways highlight the broader persuasive role of technical performance in livestream commerce, operating through both cognitive (quality appraisal) and experiential (positive viewing experience) routes.

This study highlights the critical role of interactivity and livestream performance in shaping perceived livestream quality among teenage consumers. Consistent with S-O-R theory, experiential stimuli influence internal evaluations, which subsequently lead to behavioural intentions. For Malaysian teenagers highly digital, socially driven, and entertainment-seeking perceived livestream quality becomes the primary mechanism linking experiential factors to purchase intention.

The findings support existing literature that emphasizes the importance of interactive communication and high-quality host performance. They also extend current knowledge by focusing specifically on the teenage market, which is often overlooked in livestream research.

Summary of Structural Findings

The model positions perceived livestream quality as the central mechanism that explains how livestream attributes influence teenagers' purchase intention. Interactivity strengthens intention solely through quality appraisal, whereas livestream performance affects intention through both quality perception and direct experiential value. These findings highlight the importance of product presentation clarity, credible demonstrations, and smooth livestream execution within social commerce environments.

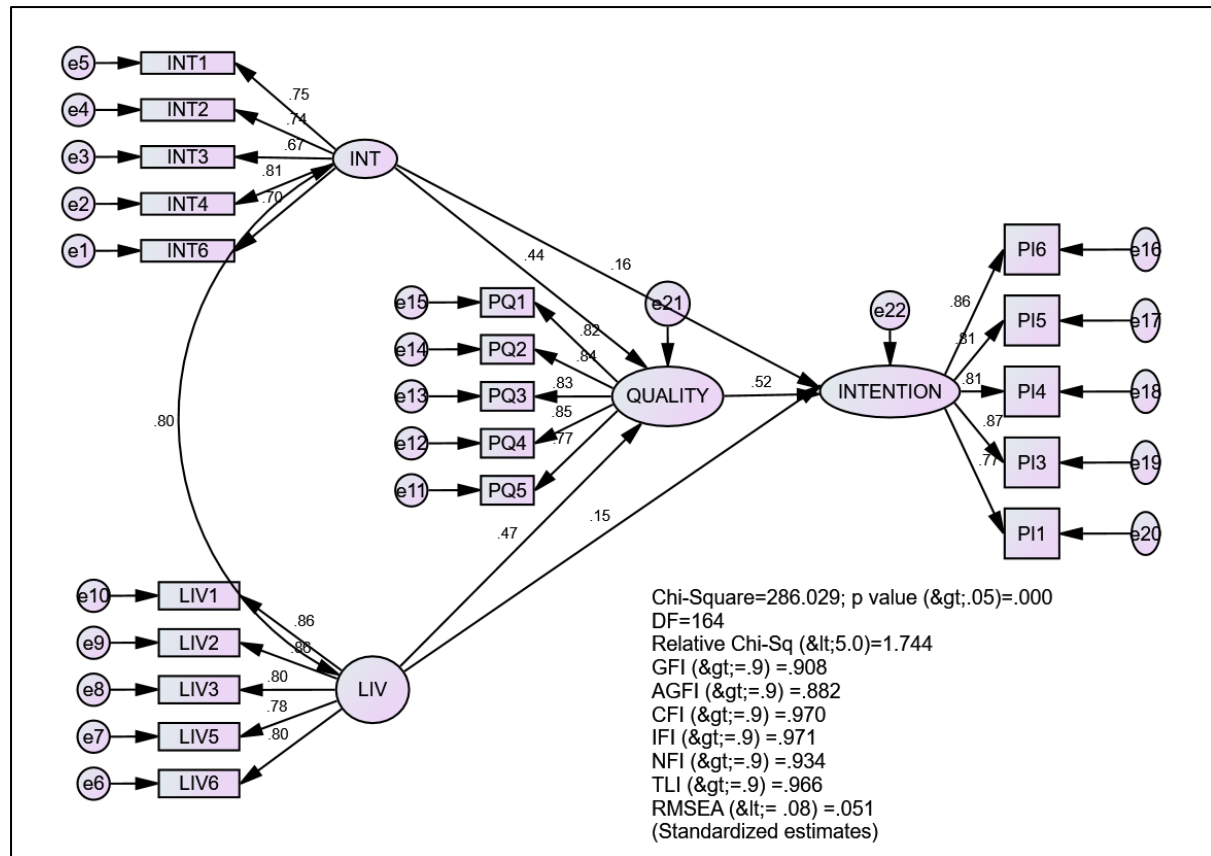


Figure 3: Mediation model

Summary of Hypothesis Testing Results

Table 3: Summary of Hypotheses Results

Hypothesis	Path	Result
H1	Interactivity → Livestream Perceived Quality	Supported
H2	Livestream Performance → Livestream Perceived Quality	Supported
H3	Livestream Perceived Quality → Purchase Intention	Supported
H4	Interactivity → Purchase Intention	Not Supported
H5	Livestream Performance → Purchase Intention	Not Supported
H6	Livestream Perceived Quality mediates the relationship between Interactivity and Purchase Intention	Supported (Full Mediation)

H7 Livestream Perceived Quality mediates the relationship between Livestream Performance and Purchase Intention Supported (Full Mediation)

CONCLUSION AND RECOMMENDATIONS

This study provides empirical evidence that interactivity and livestream performance significantly enhance perceived livestream quality, which in turn drives purchase intention among Malaysian teenagers. The findings highlight the importance of designing interactive, engaging, and high-performing livestream sessions to attract and retain gen Z in TikTok-based commerce.

In theoretical implication this study strengthens the existing livestream commerce literature by validating the Stimulus–Organism–Response (S-O-R) framework within the context of teenage consumers. The findings also demonstrate the crucial mediating role of perceived livestream quality in a TikTok-specific purchasing environment, offering empirical support for the mechanism through which experiential factors influence behaviour. Additionally, this study expands current understanding of experiential marketing by illustrating how interactive and performance-related elements shape consumer evaluations in digital retail settings.

For practical implications, the results suggest that livestream sellers should emphasize high levels of interactivity, such as rapid responses, live Q&A sessions, and the use of polls to engage viewers. Investing in professional and engaging livestream hosts is essential, as host performance directly influences perceived quality and purchase intention. Furthermore, content should strike an effective balance between information and entertainment to cater to the preferences of Gen Z consumers. Brands are also encouraged to optimize the technical aspects of their livestreams including sound clarity, lighting quality, and visual presentation to enhance the overall viewing experience.

Limitations and Recommendations for Future Research

This study is limited by its focus on Malaysian teenagers, and future research may therefore benefit from comparing consumers across different age groups or cultural contexts. Another limitation is the exclusive focus on TikTok expanding the analysis to other livestreaming platforms such as Shopee Live or Instagram Live could provide a more comprehensive understanding of livestream commerce. Future studies may also incorporate moderating variables, such as trust, product type, or influencer credibility, to further refine the model and

explore additional boundary conditions.

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