

Study on the Relationship Between the Interface Design and the User's Consumption Level of TikTok App

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Abstract

The habits of media consumers have undergone a profound shift, with short video content becoming a dominant trend, particularly among millennials and Generation Z. TikTok, as a leader in this space, has gained global popularity, yet limited research exists about its consumption patterns in Malaysia. This study investigates the relationship between TikTok's interface design and user consumption levels among Malaysian centennial users (ages 18-24). Using a quantitative survey of 40 respondents, the findings reveal a high level of TikTok consumption in terms of time spent and engagement. Statistical analysis via SPSS confirms that TikTok's interface design significantly influences user consumption behavior. These findings highlight the critical role of interface design in shaping the consumption dynamics of short-video apps, and ideally align to supporting Sustainable Development Goals 12 (SDG 12).

Keywords

TikTok, consumption level, consumption behavior, interface design

Introduction

Over the past decade, short video platforms have revolutionized the way media is consumed, marking a significant shift in global media habits. The rapid proliferation of short-form video platforms, particularly TikTok, has fundamentally reshaped media consumption habits, especially among younger generations. This study delves into the factors influencing TikTok usage among Malaysian centennials, with a specific focus on the role of interface design. By examining the level of TikTok consumption and its relationship to interface design, this research aims to contribute to a deeper understanding of user behavior on short-form video platforms.

Despite its growing popularity, little research has been conducted on TikTok consumption in Malaysia, particularly among centennial users. Interface design is central to user experience, particularly for apps like TikTok that thrive on user engagement. However, the extent to which

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TikTok's interface design influences consumption levels among Malaysian centennials remains underexplored. This study seeks to address this gap.

Literature Review

Short videos have emerged as a dominant form of media consumption, driven by their ability to deliver content in concise and engaging formats. Studies have highlighted how these platforms cater to younger generations who prefer visually rich and interactive content (Zhang et al., 2021).

Interface design has been widely recognized as a critical determinant of user behavior in digital applications. Features such as intuitive navigation, algorithm-driven personalization, and visual aesthetics enhance user satisfaction and engagement (Kim et al., 2020). TikTok, with its seamless video-scrolling interface and algorithm-based content curation, exemplifies these principles.

The burgeoning popularity of short-form video platforms has sparked significant interest among researchers. Previous studies have explored various factors influencing user engagement, including platform design, content quality, and social interaction. While these studies have provided valuable insights, there is a dearth of research specifically examining the impact of interface design on TikTok consumption. AppTrace reveals that TikTok jumped from 269th in the global app download ranking in February 2019 to third in September 2020. (Apptrace, 2020). The number of APP downloads and daily active users has continued to increase, becoming a prominent network phenomenon in those reported years as shown in Figure 1. As of October 2020, the latest official statistics show that there are 689 million TikTok monthly active users worldwide and the Chinese version of Douyin has 600 million monthly active users. (Hootsuite & We Are Social, 2020).

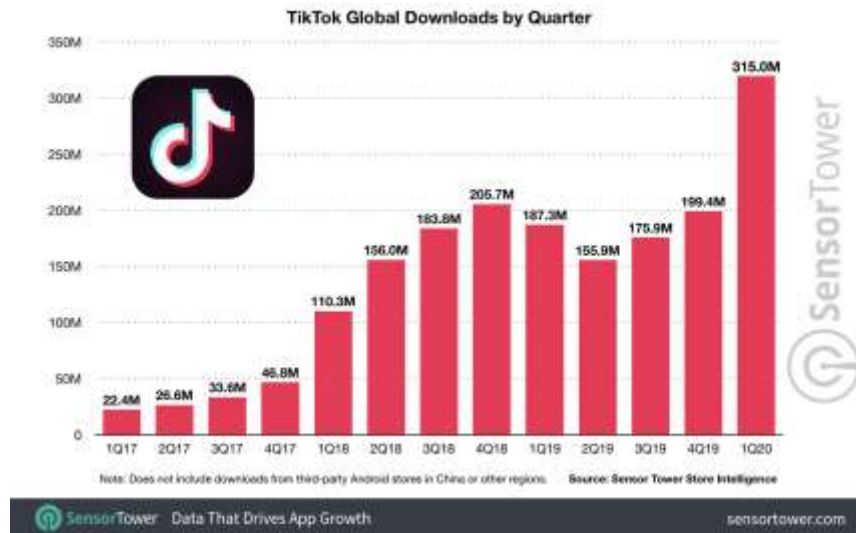


Figure 1. TikTok Global Downloads by Quarter (Sensor Tower Store Intelligence, 2020)

Methodology

This study employs a quantitative research design, focusing on the relationship between interface design and user consumption levels as shown in Figure 2.

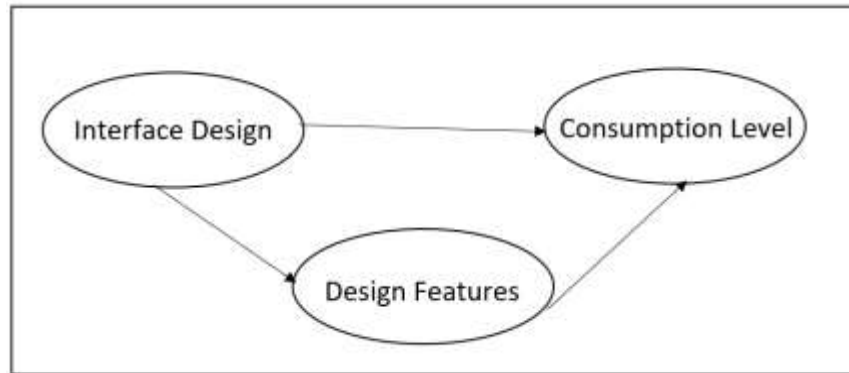


Figure 2. Conceptual Model

A quantitative, cross-sectional survey design was employed to collect data from Malaysian centennials aged 18-24. A convenience sampling technique was used to recruit participants from various universities and colleges in Malaysia. A self-administered questionnaire was developed to collect data on:

- Demographic information: Age, gender, education level, and smartphone usage.
- Consumption level: Frequency of use, time spent, engagement, and preferred content categories.
- Interface design perception: A Likert scale to measure perceptions of interface elements such as aesthetics, ease of use, and functionality.

The questionnaire was distributed electronically via social media platforms and email. Participants were invited to complete the survey voluntarily.

Descriptive statistics were used to analyze demographic information and TikTok usage patterns. Correlation analysis was employed to examine the relationship between interface design perceptions and TikTok consumption. Regression analysis was conducted to determine the extent to which interface design predicts TikTok consumption. SPSS was used for statistical analysis to identify correlations and significance between variables.

Results and Discussion

The results of this study highlight the importance of interface design in shaping user experiences on short-form video platforms. By providing a user-friendly and visually appealing interface, TikTok has successfully captured the attention of Malaysian centennials and fostered high levels of engagement.

As can be seen from Table 1, the reliability coefficient alpha for the interface design of TikTok was 0.846 and TikTok user consumption level was 0.786. Both of Cronbach's Alpha coefficient value was all higher than 0.7, so it can be inferred that the reliability of this questionnaire is high and therefore acceptable.

Table 1. The reliability of instruments

	Cronbach's Alpha	N of Items
Interface Design of TikTok	0.846	10
TikTok User Consumption Level	0.786	6

By looking at the mean value in Table 2, almost all the statement are neutral and agreeable and strongly agreeable. This means that they can be regarded as having high consumption on TikTok app in terms of time and interactive participation. Except for a statement about creating videos on TikTok, it is in disagreement that it seems that Malaysian users still rarely use TikTok to create videos. To sum up, they like to browse and watch videos, but don't really like to create videos and express themselves.

Table 2. Descriptive Statistics on Consumption

	N	Mean	Std. Deviation
You will open the TikTok app at least twice a day	40	3.7000	1.22370
You spend at least an hour on TikTok every day on average	40	3.5750	1.37538
You have liked more than 100 video in TikTok	40	3.6750	1.36603
You have created more than 20 video in TikTok.	40	2.3250	1.38467
You like to interact with other users through likes and comments.	40	3.0000	1.32045
You like to download TikTok video and post to others social media platform	40	3.5250	1.30064
Valid N (listwise)	40		

Table 3 shows the descriptive statistic results, which include the mean, standard deviation, and the respondent's perception of TikTok's interface design. By referring to the mean, most of the respondents agreed that TikTok's interface is simple and nice and will not affect the feeling of viewing ($\bar{x} = 4.0$). However, there are still one of respondents who strongly disagree with the statements, resulting in the standard deviation being 1.04.

Besides this, they also feel vertical video play mode optimizes their visual experience ($\bar{x} = 4.075$), but there is still one respondent strongly disagree with that. They also show their agreement that they find it convenient to swipe up and down to watch TikTok videos ($\bar{x} = 4.275$). The statement with the highest number of agreements is TikTok is user-friendly and good to use

and the operation of TikTok is simple and intuitive ($\bar{x} = 4.375$). There is 55% of respondents strongly agree with this statement and no one disagree with it.

Table 3. Descriptive Statistics on Interface Design

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Deviation
You think TikTok's interface is very simple and nice and will not affect the feeling of viewing.	16 (40%)	12 (30%)	9 (22.5%)	2 (5%)	1 (2.5%)	4.0000	1.03775
You feel vertical video play mode optimizes your visual experience.	17 (42.5%)	13 (32.5)	7 (17.5%)	2 (5%)	1 (2.5%)	4.0750	1.02250
You find it convenient to swipe up and down to watch TikTok videos.	21 (52.5%)	11 (27.5%)	6 (15%)	2 (5%)	0	4.2750	.90547
You think TikTok is user-friendly and good to use. The operation of TikTok is simple and intuitive	22 (55%)	11 (27.5%)	7 (17.5%)	0	0	4.3750	.77418
You think double-click to like function is good because it will not affect the video to continue playing	19 (47.5%)	14 (35%)	6 (15%)	1 (2.5%)	0	4.2750	.81610

The findings revealed that Malaysian centennials exhibit high levels of TikTok consumption, spending significant amounts of time on the platform daily. Correlation analysis indicated a positive relationship between perceptions of interface design and TikTok consumption. Regression analysis further confirmed that interface design significantly predicts TikTok consumption, with ease of use and aesthetic appeal emerging as key factors.

The results of the correlation analytics is presented in Table 4, with the significant value is less than the alpha value of 0.05. Therefore, there is a significant positive relationship between the interface design and TikTok user's consumption level, $r(38) = 0.662$, with $p = 0.000$.

Table 4. Correlation Analysis

		Interface Design	TikTok User's Consumption Level
Interface Design	Pearson Correlation	1	0.662**
	Sig. (2-tailed)		0.000
	N	40	40
TikTok User's Consumption Level	Pearson Correlation	0.662**	1
	Sig. (2-tailed)	0.000	
	N	40	40

Subsequently, Table 5 displays the model summary that supports the previous data. There is a correlation of 0.662 between the interface design and the user consumption level which shows an accepted level of prediction. ($R^2=0.438$) which means 44% of the variation in the user consumption level (DV) was explained by the interface design (IV).

Table 5. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.662 ^a	.438	.423	4.21061

With reference to Table 6 and Table 7, the significant value which is the P-value in both ANOVA and Coefficients table are 0.000, when $p \leq .05$ then the test is significant, According to the Table ANOVA, the interface design of TikTok was a significant predictor of the user consumption level, $F(1,38) = 29,595$, $p = 0.000$, $R^2 = 44$. From the Table Coefficients, it also showed the interface design was a significant predictor of TikTok's user consumption level, $\beta = 0.67$, $t(38) = 5.44$, $p = 0.000$, $R^2 = 44$.

Table 6. ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	524.689	1	524.689	29.595	0.000
	Residual	673.711	38	17.729		
	Total	1198.400	39			

Table 6. Analysis of Coefficients between the variables using Linear Regression

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	-5.779	4.749		-1.217	0.231
	Interface Design	0.624	.115	0.662	5.440	0.000

From the above SPSS result, the regression equation of relationship between the variables would be: TikTok User's Consumption Level = $-5.779 + .624 \times$ Interface Design. This clearly shows that the interface design have significant impact on the user consumption level of TikTok in Malaysia.

In conclusion, this study underscores the significant role of interface design in driving TikTok consumption among Malaysian millennials. By prioritizing factors such as ease of use, aesthetic appeal, and intuitive navigation, platform designers can enhance user experiences and foster long-term engagement. Future research should delve deeper into the underlying mechanisms of interface design's impact on user behavior and explore the potential of personalized interfaces to further optimize user experiences.

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