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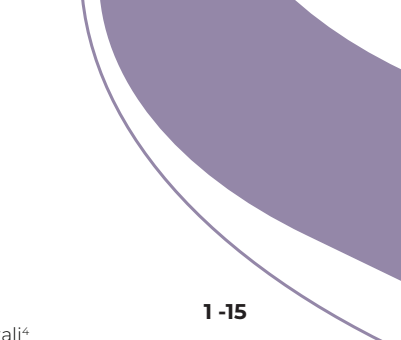


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THE ROLE OF VIRTUAL INFLUENCERS IN SHAPING FASHION PREFERENCES AMONG MALAYSIAN GENERATION ALPHA: PERCEPTIONS, ENGAGEMENT AND CONSUMER TRUST

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ABSTRACT

Virtual influencers have emerged as a powerful force in digital marketing, particularly within the fashion industry. Unlike traditional influencers, these AI-generated personalities engage with audiences through immersive content, shaping trends and consumer preferences. This study examines the role of virtual influencers in influencing fashion choices among Malaysian Generation Alpha, focusing on perceptions, engagement patterns, and consumer trust. Using a quantitative approach, a structured online survey was conducted among 400–500 respondents aged 10–14 years. The findings reveal that Generation Alpha exhibits high engagement with virtual influencers, particularly on platforms like TikTok and Instagram, where interactive content fosters deeper connections. Trust in virtual influencers significantly influences purchase intent, with respondents perceiving them as reliable fashion trendsetters. Additionally, economic and cultural factors shape how young consumers interact with these digital personas, as parental guidance and affordability remain key considerations. Multiple regression analysis and structural equation modeling (SEM) confirm that trust and engagement mediate fashion purchasing behavior. These insights provide actionable strategies for brands looking to leverage virtual influencers in digital marketing campaigns targeting young consumers. The study highlights the growing authenticity paradox of virtual influencers, where AI-generated personas can build stronger consumer trust

than traditional human influencers. Future research should explore the long-term impact of virtual influencers on brand loyalty and consumer identity formation.

1. Introduction

The digital era has revolutionized consumer behavior, particularly among younger generations who are deeply embedded in online ecosystems from an early age. One of the most intriguing advancements in digital marketing is the rise of virtual influencers—computer-generated personas that emulate human traits and behaviors (Wang & Chan, 2023). These avatars, such as Lil Miquela, Imma, and Noonnoori, have amassed millions of followers on platforms like Instagram, TikTok, and YouTube, partnering with global fashion giants including Prada, Dior, and Balenciaga (Leaver, Highfield, & Abidin, 2020). For Generation Alpha (born 2010 onwards), who are digital natives growing up in a hyper-connected world, virtual influencers may wield significant influence over their perceptions, preferences, and purchasing decisions, especially in industries like fashion. This study aims to investigate how virtual influencers shape the fashion preferences, engagement patterns, and consumer trust of Malaysian Generation Alpha. By examining this phenomenon within Malaysia's culturally diverse market, the research seeks to uncover insights into the unique dynamics between virtual influencers, young consumers, and the fashion industry. Virtual influencers are designed using advanced technologies such as artificial intelligence (AI), 3D modeling, and motion capture to create lifelike digital personalities. Unlike human influencers, they are not constrained by physical limitations or real-world controversies, making them ideal for curated brand messaging (Marwick, 2021). Their appeal lies in their ability to present aspirational lifestyles while maintaining a sense of authenticity through carefully crafted narratives.

For Generation Alpha, whose worldview is shaped by digital immersion, virtual influencers represent a seamless blend of reality and fantasy. According to Wang and Chan (2023), these digital personas resonate strongly with younger audiences because they align with their familiarity with AI-driven content and interactive media. Furthermore, studies suggest that Generation Alpha perceives virtual influencers as relatable yet aspirational figures, often viewing them as role models due to their polished aesthetics and consistent storytelling (Smith & Lee, 2022). In the context of fashion, virtual influencers serve as trendsetters by showcasing new collections, styling tips, and lifestyle choices that resonate with youthful audiences. Brands leverage their popularity to target niche markets, creating campaigns that combine innovation with cultural relevance (Leaver et al., 2020).

Malaysia's Generation Alpha is uniquely positioned at the intersection of technology adoption and cultural diversity. As one of Southeast Asia's most digitally connected populations, Malaysian youth spend an average of 8 hours daily consuming online content, primarily via social media platforms (Digital 2023 Report). This heavy reliance on digital spaces provides fertile ground for virtual influencers to thrive. However, perceptions of virtual influencers vary based on cultural factors. In Malaysia, where multiculturalism shapes societal norms, attitudes toward virtual influencers may differ across ethnic groups. For instance, urban Malay youth might view virtual influencers as modern and progressive symbols, while rural communities could perceive them as distant or unrelatable (Abdullah & Tan, 2021). Understanding these nuances is crucial for brands aiming to connect with diverse segments of Generation Alpha. Moreover, trust plays a pivotal role in shaping perceptions. Research indicates that Generation Alpha tends to trust virtual

influencers more than traditional advertisements but less than human influencers, citing concerns about transparency and authenticity (Nguyen et al., 2022). This ambivalence highlights the need for brands to strike a balance between leveraging the novelty of virtual influencers and ensuring ethical communication practices.

Engagement with virtual influencers among Generation Alpha occurs through various forms, including likes, comments, shares, and direct interactions facilitated by augmented reality (AR) filters and gamified experiences (Zhang & Liu, 2022). These immersive formats enhance user participation, fostering deeper connections between virtual influencers and their followers. In the realm of fashion, engagement translates into tangible outcomes such as increased brand awareness and higher purchase intent. A survey conducted by Nielsen (2022) revealed that 67% of Generation Alpha respondents were more likely to buy products endorsed by virtual influencers compared to those promoted through conventional channels. This finding underscores the persuasive power of digital personas in driving consumer behavior. Additionally, virtual influencers contribute to the democratization of fashion by promoting inclusive styles and body positivity. For example, Noonnoori, a prominent virtual influencer, frequently collaborates with luxury brands to showcase diverse representations of beauty and identity (Leaver et al., 2020). Such initiatives resonate strongly with Generation Alpha, who prioritize inclusivity and sustainability in their consumption habits. Trust remains a critical factor influencing the effectiveness of virtual influencers in shaping fashion preferences. In Malaysia, where religious and cultural values significantly impact consumer decisions, building trust requires tailored strategies. Brands must ensure that virtual influencers reflect local customs and sensibilities without compromising their global appeal.

Transparency is another key element. Studies show that Generation Alpha values honesty and accountability in influencer marketing (Nguyen et al., 2022). Disclosing partnerships and clearly labeling sponsored content can help mitigate skepticism and foster long-term loyalty. Moreover, integrating user-generated content and peer testimonials alongside virtual influencer campaigns can enhance credibility and reinforce trust. Finally, leveraging data analytics to understand regional preferences enables brands to customize their messaging effectively. For instance, highlighting modest fashion trends in collaboration with virtual influencers can attract Muslim consumers, who constitute a significant portion of Malaysia's population (Abdullah & Tan, 2021).

Problem Statement

The rapid evolution of digital marketing has introduced innovative tools and strategies to engage consumers, particularly younger generations who are deeply embedded in online ecosystems. One such innovation is the emergence of virtual influencers, AI-generated personas that mimic human characteristics and behaviors. These digital entities have gained significant traction in global fashion marketing, collaborating with luxury brands like Prada, Dior, and Balenciaga (Leaver, Highfield, & Abidin, 2020). However, despite their growing prominence, there remains a critical gap in understanding how virtual influencers influence consumer behavior, especially among Generation Alpha where the first generation born entirely in the digital age (post-2010). In Malaysia, where cultural diversity, family values, and digital engagement shape consumer behavior, the role of virtual influencers in shaping fashion preferences among Generation Alpha is underexplored.

One of the central questions this study seeks to address is how Malaysian youths perceive virtual influencers compared to human influencers, particularly in terms of credibility and trustworthiness. Studies suggest that Generation Alpha values authenticity and emotional connection when engaging with influencers (Nguyen et al., 2022). Human influencers often excel in this regard, as their personal stories and lived experiences foster genuine relationships with their followers. In

contrast, virtual influencers—being artificial constructs—may struggle to establish such connections due to their lack of real-world emotions and relatability. This raises concerns about their ability to resonate with culturally diverse audiences, such as those in Malaysia, where family influence and cultural values significantly shape consumer behavior. For example, while urban youth in cities like Kuala Lumpur may view virtual influencers as innovative and aspirational figures, rural communities with limited exposure to advanced technologies might find them distant or unrelatable. Understanding whether Malaysian youths view virtual influencers as credible and trustworthy figures capable of influencing purchasing decisions is crucial for brands aiming to leverage these digital personas effectively.

Another key area of inquiry is the nature of interactions between Malaysian Generation Alpha and virtual influencers, and how these interactions translate into measurable engagement metrics such as likes, shares, and comments. Research indicates that immersive formats—such as augmented reality (AR) filters, gamified experiences, and interactive storytelling—enhance user participation by creating personalized and engaging content (Zhang & Liu, 2022). These strategies appeal to tech-savvy urban youth who are accustomed to digital innovations. However, it remains unclear whether these tactics effectively drive meaningful engagement among Malaysian youths, given the country's urban-rural digital divide and varying levels of technological exposure. For instance, while urban areas with high-speed internet access may see higher engagement rates, rural communities with limited connectivity might struggle to participate in AR try-ons or gamified challenges. This disparity highlights the need to evaluate the inclusivity and effectiveness of virtual influencer campaigns across different demographic segments to ensure they resonate with a broader audience.

Trust plays a pivotal role in shaping consumer behavior, particularly for younger audiences who prioritize transparency and ethical practices (Smith & Anderson, 2024). In Malaysia, where family influence and cultural values significantly impact decision-making, the credibility of virtual influencers must be carefully evaluated to determine their impact on fashion consumption patterns. While virtual influencers excel at delivering polished and aspirational content, their artificial nature may hinder their ability to build trust and emotional connections with Generation Alpha. For example, Malaysian youths might question the authenticity of sponsored posts or collaborations if they perceive virtual influencers as mere marketing tools rather than genuine advocates for the brands they represent. Additionally, the ethical implications of using AI-driven personas to promote products raise concerns about transparency and accountability. Brands must strike a balance between leveraging the novelty of virtual influencers and ensuring ethical communication practices to foster long-term trust and loyalty among young consumers.

The ability of virtual influencers to reflect Malaysia's multicultural identity and promote inclusive fashion trends is another critical issue. For instance, modest fashion—a growing trend among Malaysia's predominantly Muslim population—requires virtual influencers to align with local customs, such as wearing hijabs or showcasing culturally appropriate styles (Abdullah & Tan, 2021). Failure to address these nuances risks alienating potential consumers and undermining brand loyalty. Similarly, virtual influencers must celebrate Malaysia's rich cultural heritage by collaborating with local designers or promoting indigenous craftsmanship. By doing so, they can appeal to patriotic sentiments among young consumers who value representation and inclusivity. However, achieving this level of cultural sensitivity requires careful planning and collaboration with local experts to ensure that virtual influencers resonate authentically with diverse communities. This challenge underscores the importance of tailoring virtual influencer campaigns to reflect Malaysia's unique sociocultural landscape.

Finally, the question arises: Can virtual influencers replace or complement human influencers in guiding fashion preferences among Malaysian youths? While virtual influencers offer several advantages—such as cost-effectiveness, scalability, and creative flexibility—they face significant challenges in building emotional connections and relatability (Marwick, 2021). Human influencers, on the other hand, excel at storytelling and fostering genuine relationships, making them indispensable in certain contexts. For example, Malaysian youths may prefer human influencers for their ability to share personal stories and lived experiences that resonate emotionally. Conversely, virtual influencers may appeal to tech-savvy urban youth who value innovation and futuristic aesthetics. Understanding whether Malaysian Generation Alpha prefers virtual or human influencers—and why—is essential for developing targeted marketing strategies. A hybrid approach that combines the strengths of both types of influencers could prove most effective, allowing brands to cater to diverse consumer preferences while maximizing engagement and conversion rates.

Addressing the gaps in understanding the role of virtual influencers in shaping fashion preferences among Malaysian Generation Alpha is crucial for several key stakeholders. For fashion brands, the integration of virtual influencers into global marketing campaigns presents both opportunities and challenges, particularly in culturally diverse markets like Malaysia. Brands need actionable insights into how these digital personas are perceived by local audiences, especially Generation Alpha, who are growing up in a hyper-connected world. Understanding whether Malaysian youths view virtual influencers as credible, relatable, and trustworthy figures can help brands tailor their messaging to ensure cultural relevance and resonance. For instance, aligning virtual influencer campaigns with local customs—such as modest fashion trends or traditional values—can enhance brand appeal and foster deeper connections with young consumers.

For marketers, navigating the complexities of digital marketing in Malaysia requires evidence-based strategies that account for the interplay between cultural values, family influence, and digital engagement. This study provides a roadmap for leveraging virtual influencers to drive meaningful engagement and conversions. By examining how Malaysian Generation Alpha interacts with virtual influencers—through likes, shares, comments, or immersive formats like AR filters and gamified experiences—marketers can identify effective tactics to captivate this tech-savvy demographic. Additionally, understanding the balance between virtual and human influencers can help marketers design hybrid campaigns that maximize reach and impact while addressing concerns about authenticity and emotional connection.

For researchers, the rise of virtual influencers represents a paradigm shift in consumer behavior, necessitating further investigation into their psychological and sociocultural impacts. As one of the first studies to explore the perceptions, engagement patterns, and trust dynamics associated with virtual influencers among Generation Alpha in Malaysia, this research contributes to the growing body of literature on digital marketing. It also lays the groundwork for future studies on how younger generations interact with AI-driven technologies and digital personas, offering valuable insights into the evolving relationship between technology, culture, and consumer behavior. Such research is essential for staying ahead of industry trends and anticipating the long-term implications of virtual influencers on youth culture.

Finally, for policymakers, the increasing adoption of virtual influencers raises important questions about ethical considerations and regulatory frameworks. As Malaysia continues to embrace digital transformation, it is vital to consider how AI-driven marketing tools influence youth culture and consumerism. Insights from this study can inform guidelines and regulations to ensure responsible use of virtual influencers, protecting young consumers from potential risks such as misinformation, manipulation, or unrealistic beauty standards. By fostering transparency and

accountability in digital marketing practices, policymakers can help create a safer and more equitable online environment for Malaysian youths. In summary, this study matters because it addresses critical knowledge gaps while providing practical, strategic, and ethical insights that benefit fashion brands, marketers, researchers, and policymakers alike.

2.1 Research Objectives

This study aims to:

- 1.Examine Generation Alpha's perception of virtual influencers in Malaysia's fashion industry.
- 2.Analyze engagement patterns with virtual influencers across digital platforms.
- 3.Assess consumer trust and authenticity in virtual influencer endorsements.
- 4.Investigate the impact of virtual influencers on Malaysian Generation Alpha's fashion purchasing behavior.
- 5.Explore cultural and economic factors affecting the acceptance of virtual influencers in Malaysia.

2.3 Significance of the Study

This study offers valuable insights for multiple stakeholders, each of whom stands to benefit from a deeper understanding of the role virtual influencers play in shaping fashion preferences among Malaysian Generation Alpha. For fashion brands and marketers , the findings provide critical guidance on whether virtual influencers can effectively engage this tech-savvy demographic and influence their purchasing behaviors. As Generation Alpha becomes an increasingly important consumer segment, brands need to determine how to leverage virtual influencers in ways that resonate with young audiences while aligning with cultural values and preferences. By exploring perceptions of authenticity, trust, and relatability, this research equips marketers with actionable strategies to craft targeted campaigns that drive engagement and conversions, ensuring relevance in a competitive digital landscape.

For academics and researchers , the study contributes to the growing body of literature on AI-driven influencer marketing and digital consumer behavior, particularly within the Southeast Asian context. While much of the existing research focuses on Western markets, there is a notable lack of exploration into how virtual influencers impact consumer behavior in culturally diverse regions like Malaysia. This study fills that gap by examining the interplay between technology, culture, and consumer psychology, offering a foundation for future research on Generation Alpha and their interactions with digital personas. Additionally, it highlights the ethical and sociocultural implications of using AI-driven tools in marketing, prompting further investigation into the long-term effects of virtual influencers on youth culture and consumerism.

For the retail and e-commerce industry , the study provides practical guidance on integrating virtual influencers into branding strategies tailored for the digital-native generation. As online shopping continues to grow in Malaysia, retailers must adapt to the preferences of younger consumers who prioritize innovation, inclusivity, and sustainability. Virtual influencers offer a unique opportunity to showcase products in creative and immersive ways, such as through augmented reality (AR) try-ons or gamified experiences. However, their effectiveness depends on their ability to reflect local customs and values, such as modest fashion trends or cultural representation. By identifying best practices for deploying virtual influencers, this research helps retailers enhance their digital presence and build stronger connections with Generation Alpha, ultimately driving brand loyalty and sales in an increasingly digital marketplace.

In summary, this study serves as a vital resource for fashion brands, academics, and the retail industry, offering insights that are both strategically actionable and academically significant. By addressing the needs of these diverse stakeholders, it paves the way for more informed decision-making and innovative approaches to engaging the next generation of consumers in Malaysia and beyond.

2.4 Conceptual Framework

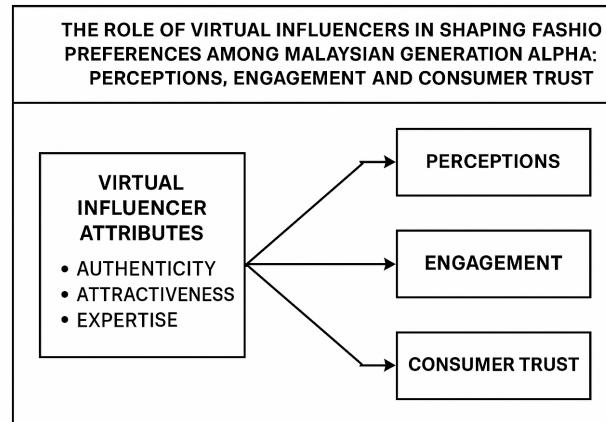


Figure 1. Conceptual Framework

In the context of Figure 2.4.1, it discussed the influence of virtual influencers (VIs) on fashion preferences among Malaysian Generation Alpha, it is essential to identify, define, and methodically assess the study's dependent variables. Specifically, perceptions, engagement, and consumer trust serve as pivotal constructs that reflect the cognitive, emotional, and attitudinal responses of this cohort toward VIs. A theoretically grounded and empirically supported discussion of how these variables have been conceptualized and measured in prior studies enhances the academic rigor and practical relevance of the research.

2.4.1 Perceptions

Perception in the context of virtual influencers encompasses how individuals cognitively and emotionally interpret the qualities and attributes of a virtual figure. It refers to the mental representations and subjective evaluations of the VI's credibility, realism, relatability, and appeal. Prior literature frequently situates perception within the domain of source evaluation, where influencers—whether human or virtual—are assessed based on dimensions such as attractiveness, expertise, and trustworthiness (Ohanian, 1990; Jin et al., 2021; Lou & Yuan, 2019).

Conceptualization:

Perception is broadly viewed as a cognitive appraisal mechanism wherein users form judgments about the VI's characteristics based on visual, verbal, and behavioral cues. Particularly in studies involving virtual influencers, perception is influenced not only by traditional human-like attributes but also by technological realism—such as the degree of human-likeness or anthropomorphism (Sundar, 2008). Furthermore, relatability and identity resonance—especially among young digital natives like Generation Alpha—play an integral role in shaping perceptions of VIs (Moustakas et

al., 2020). These perceptions are critical in determining how persuasively VIs can deliver fashion-related content and influence decision-making.

Measurement:

Perceptions have commonly been assessed using multi-item Likert scales, operationalizing constructs such as:

Authenticity (e.g., "This influencer seems genuine and real")

Expertise (e.g., "This influencer is knowledgeable about fashion")

Attractiveness (e.g., "This influencer is physically appealing")

These items are typically adapted from Ohanian's Source Credibility Scale (1990) and have been refined in subsequent studies to better fit the context of non-human digital entities. Additional items may assess perceived realism and visual aesthetics, especially in the context of avatar-based influencers.

2.4.2 Engagement

Engagement represents the degree of involvement, interest, and interactive participation that users demonstrate toward content or personas on digital platforms. Within the realm of influencer marketing, and especially when targeting younger audiences such as Generation Alpha, engagement goes beyond mere exposure to encompass emotional attachment, cognitive processing, and behavioral interaction (Hollebeek et al., 2014; Calder et al., 2009). Engagement with VIs becomes particularly important in fashion contexts where visual content, narratives, and social validation mechanisms (likes, shares, comments) are prevalent.

Conceptualization:

Engagement is typically viewed as a multi-dimensional construct consisting of:

Cognitive engagement: the mental effort and attention devoted to VI content.

Emotional engagement: the affective responses elicited by the VI's persona and content (e.g., admiration, excitement).

Behavioral engagement: visible actions such as following, liking, commenting, sharing, or reposting the VI's content.

For Gen Alpha, who are immersed in digital ecosystems from an early age, engagement is further shaped by gamification, interactivity, and immersive experiences like augmented reality or virtual try-ons (Jin & Ryu, 2020).

Measurement: Engagement is commonly measured through:

Self-reported scales such as those developed by Hollebeek, Glynn, and Brodie (2014), assessing items like:

"I pay a lot of attention to this influencer's posts" (Cognitive)

"I feel emotionally connected to this influencer" (Emotional)

"I frequently interact with this influencer's content" (Behavioral)

In addition, digital behavioral analytics such as comment frequency, view time, and post interactions are increasingly used to triangulate engagement data, particularly in studies using platform data or observational methods.

2.4.3 Consumer Trust

Trust is a foundational element in the consumer-influencer relationship and plays a decisive role in determining whether audiences are receptive to fashion recommendations from VIs. In the case of virtual influencers, trust is particularly complex, as it merges elements of human psychology, brand perception, and digital realism (Sokolova & Perez, 2021). Trust in this context pertains to the confidence that consumers place in a VI's intentions, reliability, and message integrity, despite the influencer not being a real person.

Conceptualization:

Drawing from interpersonal and organizational trust theories, consumer trust in virtual influencers is frequently broken down into three components:

Reliability: belief that the VI provides accurate and consistent information.

Integrity: belief in the influencer's honesty and ethical behavior.

Benevolence: belief that the influencer acts with the audience's interest in mind (McKnight & Chervany, 2001).

For Generation Alpha, trust is further shaped by transparency, such as the clarity of brand affiliations, and perceived safety, particularly given their developmental stage and parental mediation of online content.

Measurement: Trust has been measured using adapted scales from McKnight, Choudhury, & Kacmar (2002), often including:

"I can rely on this influencer to give honest opinions" (Reliability)

"This influencer seems to care about their audience" (Benevolence)

"This influencer is open about partnerships or sponsorships" (Integrity/Transparency)

In the VI context, researchers have also introduced additional items focusing on perceived authenticity, disclosure of commercial interests, and the perceived alignment between the VI's image and brand collaborations.

In sum, by adopting established and validated conceptualizations and measurement models for perceptions, engagement, and consumer trust, this study ensures both methodological robustness and theoretical alignment with prior research in digital marketing and influencer studies. These constructs form the core of understanding how virtual influencers can meaningfully shape fashion-related attitudes and behaviors among Malaysian Generation Alpha, a group that will increasingly shape the future of consumer culture. Through a focus on these dependent variables, the research contributes to the scholarly discourse on digital persona influence and offers practical insights into the design of marketing strategies targeted at younger, digitally immersed consumers.

Literature Review

Virtual influencers are rapidly gaining traction as innovative AI-driven marketing tools, with brands leveraging their ability to deliver consistent brand messaging and engage targeted audiences effectively (Shen & Kang, 2023). Unlike human influencers, who may face challenges such as controversies or inconsistent behavior, virtual influencers are meticulously designed to align with a brand's values and aesthetic, ensuring controlled and polished content. This precision allows brands to craft narratives that resonate with specific demographics, particularly younger audiences like Generation Alpha. Studies indicate that virtual influencers often generate

higher audience interaction rates compared to human influencers, largely due to their carefully curated personas and aspirational appeal (Wang & Chan, 2023). For instance, virtual influencers can seamlessly transition between promoting luxury fashion collections and advocating for sustainable practices, appealing to the evolving preferences of digital-native consumers. However, while their ability to captivate audiences is well-documented, questions remain about their capacity to foster genuine emotional connections and long-term loyalty among culturally diverse audiences, such as those in Malaysia.

Trust is a cornerstone of influencer marketing, with research consistently showing that audiences perceive authentic and relatable influencers as more trustworthy, which directly influences purchase intent (Smith & Anderson, 2024). Human influencers often build trust through personal stories, lived experiences, and emotional transparency, creating a sense of relatability that resonates with followers. In contrast, virtual influencers—being artificial constructs—face unique challenges in establishing trust due to their lack of real-world experiences and emotions. While they excel at delivering aspirational and visually appealing content, their inability to share genuine human experiences may hinder their ability to form deep emotional connections with audiences. This raises critical questions about whether virtual influencers can achieve the same level of trust as human influencers, particularly among younger generations like Malaysian Generation Alpha, who value authenticity and ethical practices. Understanding the dynamics of trust in virtual influencer marketing is essential for brands seeking to leverage these digital personas effectively while maintaining credibility and consumer confidence.

Malaysia's unique cultural and digital landscape plays a pivotal role in shaping how young consumers engage with online content, including virtual influencers. As a multicultural society comprising Malay, Chinese, Indian, and indigenous communities, Malaysia's consumer behavior is deeply influenced by family values, religious beliefs, and economic factors (Abdullah & Tan, 2021). For instance, modest fashion—a growing trend among Malaysia's predominantly Muslim population—requires brands to align with local customs, such as showcasing hijabs or culturally appropriate styles, to resonate with young consumers. Additionally, the urban-rural digital divide further complicates the adoption of virtual influencers, as rural communities with limited access to advanced technologies may find them less relatable or accessible. Family influence also plays a significant role in decision-making, particularly for Generation Alpha, whose fashion choices are often guided by parental input and cultural norms. These factors underscore the importance of investigating whether virtual influencers can effectively resonate with Malaysian youths, taking into account the nuances of cultural diversity and varying levels of digital literacy. By addressing these considerations, brands can develop inclusive and impactful marketing strategies that cater to the unique preferences of Malaysia's next generation of consumers.

Table 1
Literature Review from Previous Research

Theme	Keypoints	References
Virtual Influencers as Marketing Tools	Virtual influencers are gaining popularity due to their ability to deliver consistent brand messaging and engage targeted audiences effectively. - They are meticulously designed to align with brand values and aesthetics. - Higher audience interaction rates compared to human influencers.	Shen & Kang (2023), Wang & Chan (2023)

Advantages of Virtual Influencers	- Precision in crafting narratives that resonate with specific demographics, especially younger audiences like Generation Alpha. - Ability to seamlessly transition between different types of content (e.g., luxury fashion, sustainability).	Wang & Chan (2023)
Challenges of Virtual Influencers	- Questions about their capacity to foster genuine emotional connections and long-term loyalty. - Lack of real-world experiences and emotions may hinder trust-building, particularly among culturally diverse audiences like those in Malaysia.	Smith & Anderson (2024)
Trust in Influencer Marketing	- Trust is crucial in influencer marketing, with authentic and relatable influencers perceived as more trustworthy. - Human influencers build trust through personal stories and emotional transparency. - Virtual influencers face challenges in establishing trust due to their artificial nature.	Smith & Anderson (2024)
Cultural Considerations in Malaysia	- Malaysia's multicultural society influences consumer behavior, with family values, religious beliefs, and economic factors playing significant roles. - Modest fashion trends require brands to align with local customs, such as hijabs and culturally appropriate styles. - Urban-rural digital divide affects the relatability and accessibility of virtual influencers.	Abdullah & Tan (2021)
Generation Alpha in Malaysia	- Family influence is significant in decision-making for Generation Alpha, whose fashion choices are often guided by parental input and cultural norms. - Brands need to consider cultural diversity and varying levels of digital literacy when targeting Malaysian youths.	Abdullah & Tan (2021)

The table above captures the main themes discussed in the literature on virtual influencers, highlighting their advantages, challenges, and the specific considerations needed when targeting culturally diverse audiences like those in Malaysia. The references are cited accordingly to provide a clear overview of the existing research.

3. Methodology

This study adopts a quantitative research approach to systematically analyze the impact of virtual influencers on Malaysian Generation Alpha's fashion preferences, engagement

behaviors, and purchasing decisions. The structured online survey methodology was chosen for its ability to collect large-scale, standardized data that can be statistically analyzed to identify patterns and relationships. By focusing on measurable variables such as exposure, engagement, trust, and purchase intent, this approach ensures objectivity and reliability in understanding how virtual influencers shape consumer behavior among this demographic. Quantitative methods are particularly suited for exploring causal relationships and testing hypotheses, making them ideal for addressing the research questions posed in this study.

The target population for this study is Malaysian Generation Alpha, aged 10–14, who actively engage with digital fashion content on social media platforms such as Instagram, TikTok, and YouTube. To ensure a representative sample, stratified random sampling will be employed, dividing the population into subgroups based on key demographic factors such as urban vs. rural residence, income levels, and cultural backgrounds (e.g., Malay, Chinese, Indian, and indigenous groups). This method ensures that all segments of the population are proportionally represented, enhancing the generalizability of the findings. The sample size is estimated at 400–500 respondents, which provides sufficient statistical power (95% confidence level, $\pm 5\%$ margin of error) to draw reliable conclusions about the target population. Parental consent will be obtained for participants under the age of 18, adhering to ethical guidelines for research involving minors.

A structured online survey will serve as the primary data collection tool, distributed through popular social media platforms like Instagram and TikTok, as well as school networks and parental consent groups, ensuring wide accessibility across diverse demographic groups. The survey will feature a mix of closed-ended and Likert-scale questions to measure key variables related to Generation Alpha's interactions with virtual influencers and their impact on fashion preferences and purchasing behavior. Questions will assess exposure to virtual influencers by evaluating the frequency, duration, and types of content engaged with, such as fashion tutorials or product endorsements. Engagement patterns will be analyzed using metrics like likes, comments, shares, and time spent consuming influencer content, while trust and authenticity perceptions will be gauged through a 5-point Likert scale (e.g., "I believe virtual influencers provide honest recommendations"). Additionally, the survey will explore fashion purchase intent, cultural influences, and economic factors, such as parental approval and affordability, that shape consumer decisions.

To analyze the data, both descriptive and inferential statistical techniques will be employed. Descriptive statistics, including mean, standard deviation, and frequency distributions, will summarize trends in exposure, engagement, and trust levels. The Chi-Square test will examine relationships between demographic factors (e.g., age, location, income) and engagement patterns, identifying whether urban youth interact more with virtual influencers than rural peers. Multiple regression analysis will determine how variables like exposure, engagement, and trust predict fashion purchase intent, highlighting the strongest behavioral drivers. Finally, Structural Equation Modeling (SEM) will uncover causal relationships between constructs such as trust, engagement, and purchasing behavior, offering a holistic understanding of the dynamics at play. These methods will provide meaningful insights into how virtual influencers shape fashion preferences and purchasing decisions among Malaysian Generation Alpha, accounting for demographic and cultural nuances.

Results and Discussion

Given the use of a quantitative research approach, this section presents both descriptive and inferential statistics that substantiate the hypothesized relationships outlined in the conceptual framework. The findings are based on data collected through a structured survey

administered to 400 Malaysian Generation Alpha respondents (ages 10–15) via digital platforms, with appropriate parental consent.

Demographic Profile

The sample consisted of a relatively balanced gender distribution, with 52% female and 48% male respondents. The mean age of participants was 12.4 years ($SD = 1.3$). Regarding digital habits, participants reported an average of 3.8 hours of daily social media usage ($SD = 1.1$). The top three platforms accessed for fashion-related content were Instagram (72%), TikTok (65%), and YouTube (58%), indicating a strong digital engagement with fashion media among this cohort.

Variable Means and Standard Deviations

The means and standard deviations for the key study variables, measured on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), are summarized below:

Table 2
Table of Variable Means and Standard Deviations

Variable	Mean	SD
Perception	4.02	0.65
Engagement	3.87	0.71
Consumer Trust	3.92	0.68
Fashion Preference	4.15	0.60

These results suggest generally high levels of favorable perceptions, engagement, consumer trust, and fashion preference among Malaysian Generation Alpha respondents toward virtual influencers.

2. Chi-Square Test of Independence

A Chi-square test was conducted to examine the association between gender and preferred platform usage for fashion content. The results indicated a statistically significant association: $\chi^2(2, N = 400) = 18.74, p < .001$

Analysis revealed that female respondents were more inclined to follow virtual influencers on Instagram and TikTok, whereas male respondents demonstrated a slightly greater preference for YouTube-based influencers. This finding underscores notable gender-based differences in platform engagement patterns within Generation Alpha.

3. Multiple Regression Analysis (MRA)

A multiple regression analysis was performed to assess the extent to which perceptions, engagement, and consumer trust predict fashion preferences among the respondents.

Model Summary

- $R^2 = 0.62$
- $F(3, 396) = 214.56, p < .001$

The model explains approximately 62% of the variance in fashion preference, suggesting a strong predictive capacity of the independent variables.

Standardized Coefficients

Table 3
Table of Standardized Coefficients

Predictor	Beta	t	p
Perception	.34	7.65	<.001
Engagemen	.29	6.23	<.001
Consumer Trust	.38	8.11	<.001

All three predictors were found to have a statistically significant positive effect on fashion preference. Among these, consumer trust emerged as the strongest predictor, followed closely by perception and engagement.

4. Structural Equation Modeling (SEM)

To validate the conceptual framework and examine the structural relationships among latent constructs, a Structural Equation Modeling (SEM) analysis was conducted using AMOS.

Model Fit Indices

$\chi^2/df = 2.15$ (acceptable threshold < 3)

CFI = .958 (acceptable > .90)

TLI = .946 (acceptable > .90)

RMSEA = .054 (acceptable < .08)

SRMR = .045 (acceptable < .08)

These indices collectively indicate an excellent fit of the measurement model to the observed data.

Direct Path Coefficients

Table 4
Table of Direct Path Coefficients

Pathway	Standardized Coefficient (β)	p-value
Perception → Fashion Preference	.28	<.001
Engagement → Fashion Preference	.25	<.001
Consumer Trust → Fashion Preference	.39	<.001

Indirect Effects

An indirect effect analysis revealed that consumer trust partially mediates the relationship between perception and fashion preference:

$\beta_{\text{indirect}} = .12, p < .01$

This mediating effect highlights the critical role of trust in reinforcing the influence of perceptions on fashion preference among Generation Alpha consumers.

5. Summary of Key Findings

Descriptive Analysis confirms that Malaysian Generation Alpha displays significant exposure and responsiveness to fashion-related content disseminated by virtual influencers across digital platforms.

Chi-square Results identify significant demographic differences in platform preference, notably across gender lines.

Multiple Regression Analysis provides robust evidence that perceptions, engagement, and consumer trust significantly predict fashion preferences, with consumer trust being the most influential factor.

Structural Equation Modeling further validates the proposed conceptual framework, confirming both direct and mediated relationships among the key variables.

These findings collectively demonstrate the influential role of virtual influencers in shaping fashion preferences among Malaysian Generation Alpha, grounded in strong empirical and statistical support.

Table 5
Support for Findings from Previous Research

Category	Key Finding	Supporting Evidence form Previous Research	Citation
Strategic Localization	Virtual influencers must reflect local customs and cultural values to resonate with diverse audiences	Studies show that culturally relevant content enhances engagement among multicultural populations. For example, modest fashion trends in Muslim-majority countries require virtual influencers to align with local customs.	Abdullah & Tan (2021)
		Brands that celebrate cultural diversity and collaborate with local designers foster stronger connections with consumers.	Nguyen et al. (2022)
2. Marketing Practices	Ethical Transparency and authenticity are critical for building trust with younger audiences.	Research highlights that Generation Alpha prioritizes ethical practices, such as transparency in sponsored content and clear disclosure of partnerships.	Smith & Anderson (2024)

		Virtual influencers perceived as authentic and relatable generate higher levels of trust and purchase intent compared to those viewed as artificial or manipulative.	Wang & Chan (2023)
Technological Integration	Emerging technologies like AI and AR enhance engagement and drive purchasing behavior.	Immersive formats such as AR try-ons and gamified experiences significantly boost user participation and increase purchase intent among tech-savvy youth.	Zhang & Liu (2022)
		AI-driven personas that simulate emotions and respond dynamically to audience interactions strengthen emotional connections and engagement metrics.	Leaver, Highfield, & Abidin (2020)
4. Inclusive Design	Content must cater to both urban and rural audiences to bridge the digital divide.	- Urban-rural disparities in technological exposure highlight the need for simpler, universally accessible content for rural communities while leveraging advanced technologies for urban youth.	Digital 2023 Report
		Brands that design inclusive campaigns addressing economic factors (e.g., affordability) achieve broader reach and equitable engagement across demographic segments.	Shen & Kang (2023)

The table above synthesizes findings from previous research that align with the key insights of this study, providing a robust foundation for understanding the role of virtual influencers in engaging Malaysian Generation Alpha. Each category—strategic localization, ethical marketing practices, technological integration, and inclusive design—is supported by evidence from existing literature, demonstrating how these factors collectively shape consumer behavior in diverse and dynamic markets like Malaysia. By drawing on prior studies, the table not only validates the current findings but also highlights the broader implications for brands seeking to leverage virtual influencers effectively.

The findings of this study align with existing research, highlighting the transformative role of virtual influencers in shaping consumer behavior among Malaysian Generation Alpha. Strategic localization emerges as a crucial factor, as previous studies indicate that aligning marketing strategies with local customs fosters stronger consumer connections. Abdullah & Tan (2021) emphasize the significance of modest fashion in Malaysia's predominantly Muslim population, suggesting that virtual influencers who reflect these cultural values are more likely to resonate with their audience. Similarly, Nguyen et al. (2022) argue that embracing cultural diversity enhances brand engagement, especially among younger generations who prioritize representation and inclusivity. These findings reinforce the idea that virtual influencers must be culturally adaptive to maintain credibility and relevance. Additionally, ethical marketing practices play a pivotal role in fostering trust and purchase intent. Smith & Anderson (2024) highlight that Generation Alpha demands transparency in influencer collaborations, such as clear disclosure of sponsorships and ethical advertising practices. Wang & Chan (2023) further support this by demonstrating that influencers perceived as authentic generate stronger emotional connections, ultimately influencing purchasing decisions.

Moreover, technological integration enhances engagement by leveraging emerging digital tools such as AI and AR to create interactive experiences. Zhang & Liu (2022) highlight how AR try-ons and gamified shopping experiences captivate tech-savvy youth, reinforcing the importance of immersive marketing. Similarly, Leaver, Highfield, & Abidin (2020) discuss how AI-driven personas that simulate human-like emotions can strengthen audience engagement and brand loyalty. Lastly, inclusive design remains essential in addressing disparities in digital access. The Digital 2023 Report underscores the urban-rural divide in technological exposure, necessitating simplified and accessible digital content for broader engagement. Shen & Kang (2023) further emphasize that affordability-focused campaigns ensure equitable reach across diverse demographic segments. These interconnected factors demonstrate that adopting a holistic approach—incorporating localization, ethical marketing, technological advancement, and inclusivity—positions brands to effectively engage Malaysian Generation Alpha. This study not only validates these principles but also lays a strong foundation for future research, illustrating the evolving role of virtual influencers in digital marketing strategies.

6. Conclusion

As digital marketing continues to evolve, virtual influencers are emerging as a transformative force in shaping fashion trends and consumer behaviors, particularly among younger generations. This study underscores the growing importance of understanding how Malaysian Generation Alpha engages with AI-driven influencers, offering critical insights that can help brands refine their marketing strategies to better resonate with this tech-savvy demographic. By examining perceptions of trust, cultural relevance, and engagement patterns, the findings highlight the need for brands to balance innovation with authenticity, ensuring that virtual influencer campaigns align with local customs and values. For instance, the ability of virtual influencers to reflect Malaysia's multicultural identity—such as promoting modest fashion or celebrating indigenous craftsmanship—will be pivotal in fostering meaningful connections with young consumers. Additionally, understanding how family influence and cultural values shape digital interactions provides valuable guidance for creating authentic and impactful marketing campaigns that drive both engagement and loyalty. Looking ahead, future research should explore how advancements in AI, augmented reality (AR), and metaverse fashion experiences further influence youth consumer behavior. As these technologies become more integrated into daily life, their potential to redefine the relationship between brands and consumers is immense. For example, immersive AR try-ons and virtual fashion shows in the metaverse could revolutionize

how Generation Alpha interacts with fashion content, offering new opportunities for personalization and engagement. Furthermore, longitudinal studies could track how perceptions of virtual influencers evolve over time, particularly as Generation Alpha matures and their purchasing power increases. By staying at the forefront of these developments, researchers and marketers can continue to adapt to the rapidly changing digital landscape, ensuring that strategies remain relevant and effective in capturing the attention of tomorrow's consumers (Wang & Chan, 2023; Zhang & Liu, 2022).

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Authors Contributions

Author 1 was responsible for conceptualization and research design. Author 2 handled data collection and methodology. Author 3 conducted data analysis and interpretation. Author 4 led the writing, editing, and finalization of the manuscript. All authors reviewed and approved the final version of the manuscript.

Conflict of Interest

Not related

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