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Analyzing Audience Emotions Towards Virtual Influencers:
Enhancing authenticity and emotional connection

Zhongyao Yi[1], Mohd Khairulnizam Ramlie[1]*, Shafilla Subri[2], Nianyou Zhu[2]
* Correspoding author

[1] Universiti Teknologi MARA, College of Creative Arts, Perak Branch, Malaysia, [2] Universiti Teknologi MARA, College of Creative Arts, Kedah Branch, Malaysia

yizhongyao.eric@gmail.com, nizamramlie@uitm.edu.my, shafilla@uitm.edu.my, 2022151473@student.uitm.edu.my
Tel: 01114953312

Abstract
This study delves into audiences' emotional responses to virtual influencers, aiming to tackle the challenges associated with authenticity and emotional engagement. Utilizing a comprehensive analysis of social media interactions and focus group data, key emotional reactions and sentiments expressed by users are identified. The findings highlight widespread concerns regarding the absence of genuineness and authentic engagement in virtual influencers. Drawing on these insights, the paper proposes strategic and technological innovations aimed at enhancing the authenticity and emotional connection of virtual influencers, thereby improving their effectiveness and audience engagement.

Keywords: Virtual Influencers, Audience Emotions, Authenticity,

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1.0 Introduction

1.1 Background
In recent years, the rise of virtual influencers—digital personas that interact with real audiences—has redefined engagement in the digital ecosystem. These entities, ranging from entirely computer-generated figures to enhanced versions of real individuals, operate across various platforms, shaping consumer behaviour and brand interactions (Mrad et al., 2022). They are not merely extensions of existing marketing strategies but central figures in narratives crafted to resonate with a tech-savvy audience.
The appeal of virtual influencers lies in their perpetual availability and controllability, which surpass the limitations of human influencers (Allal-Chérif et al., 2024). Brands and organisations utilise these digital personas to maintain a constant presence on social media, pushing the boundaries of traditional marketing and engagement strategies. Moreover, the design and behaviour of virtual influencers can be meticulously crafted to align with specific audience preferences, enhancing their ability to connect on a personal level despite their artificial nature.
However, the surge in popularity of virtual influencers brings challenges, particularly regarding authenticity, a crucial element in building trust and emotional connection with audiences (Wibawa et al., 2022). Authenticity in digital interactions becomes complex when the entity lacks a genuine human backstory or real-life experiences. This dissonance between the perceived personality and the

underlying artificiality can affect how audiences perceive and emotionally respond to virtual influencers. As such, examining the emotional impact of these digital personas becomes imperative to understanding and enhancing their effectiveness in digital marketing and media.

1.2 Problem Statement
While virtual influencers continue to gain traction in digital marketing, significant concerns persist regarding their ability to forge authentic emotional connections with audiences. Despite their growing presence and influence, there is a notable gap in understanding how these digital entities impact the emotional dynamics of their interactions (Lim & Lee, 2023). Research indicates that the perceived authenticity of influencers plays a critical role in how audiences respond emotionally and engage with content (Yu et al., 2024). However, the unique nature of virtual influencers, who lack real human experiences and spontaneity, raises questions about their capacity to truly resonate emotionally with users.

The challenge, therefore, lies in deciphering the emotional responses elicited by virtual influencers and determining how the perceived lack of genuineness and authentic engagement influences these responses. This issue is crucial as emotional engagement has been directly linked to consumer loyalty and decision-making in digital marketing spheres (Gerlich, 2023). Understanding this dynamic is essential for developing more effective strategies in using virtual influencers, ensuring they can genuinely connect with audiences and not just serve as novel marketing tools.

1.3 Research Objectives and Questions
The primary objectives of this study are to:
A. Examine the nature of emotional responses elicited by virtual influencers, identifying the types and intensities of emotions involved.
B. Assess the impact of perceived authenticity on the emotional engagement of audiences with virtual influencers.
C. Propose and evaluate strategies to enhance virtual influencers' authenticity and emotional connection to improve their effectiveness as marketing tools.
To achieve the above objectives, this study will address the following key questions:
A. What are the predominant emotional responses to virtual influencers among different audience segments?
B. How does the perceived authenticity of virtual influencers affect audience emotions and engagement levels?
C. What strategies can be employed to enhance virtual influencers' perceived authenticity and emotional connection, and what is their effectiveness in a marketing context?

2.0 Literature Review

2.1 Evolution of Virtual Influencers
While seemingly a product of modern technological advances, the concept of virtual influencers traces back to earlier forms of digital characters in media and entertainment. Initially, these entities served primarily as novelties or secondary elements within larger media properties (Drenten & Brooks, 2020). However, with the advent of social media and advancements in computer graphics, virtual influencers have evolved into independent personas capable of significant audience interaction and commercial impact (Arsenyan & Mirowska, 2021). These digital entities are now often indistinguishable from real humans in their presentation and are utilized by brands to engage with a global audience 24/7.

2.2 Emotional Engagement in Digital Media
Emotional engagement in digital media is facilitated by the interactive and immersive qualities of online platforms, which can amplify emotional responses and foster a sense of connection with digital content (Mirowska & Arsenyan, 2023). Research in this area has highlighted the importance of emotional stories and relatable content in eliciting strong audience reactions (Meng et al., 2021). By leveraging narrative and multimedia elements, virtual influencers can create compelling, emotionally charged experiences that rival those offered by human influencers.

2.3 Authenticity and Its Impact on Audience Perception
Authenticity in the realm of virtual influencers is a complex construct, often associated with transparency, genuineness, and reliability (Koles et al., 2024). Studies have shown that audiences tend to form stronger emotional bonds with influencers they perceive as authentic, affecting their trust and loyalty (Na et al., 2023). The challenge with virtual influencers is maintaining these authenticity elements despite their artificial nature. The perceived authenticity of these influencers significantly impacts how audiences perceive their messages and, ultimately, how they engage with the brands these influencers represent (de Brito Silva et al., 2022).

3.0 Methodology

3.1 Research Design
This study employs a quantitative research design to systematically investigate the emotional responses to virtual influencers and the impact of perceived authenticity on audience engagement. By utilizing a structured approach through online surveys and social media

analytics, the research aims to quantify the relationship between audience perceptions and their emotional reactions. This design allows for statistical analysis of large data sets, providing robust insights into the patterns and trends that define audience interactions with virtual influencers.

3.2 Data Collection
Data collection for this study was conducted using a single method: online surveys on the BiliBili platform. 100 participants were recruited to complete the survey, which focused on gathering detailed responses regarding their emotional reactions to and perceptions of authenticity in virtual influencers. The survey included Likert-scale questions to assess various attributes such as interactivity, trust, emotional connection, preferences for influencer characteristics (gender, age, style), and content engagement types. Additionally, demographic information was collected to analyse variations across different audience segments, providing a nuanced understanding of the audience's engagement with virtual influencers on BiliBili. This method ensures a focused approach to capturing direct feedback from users who regularly interact with virtual influencers.

3.3 Data Analysis
The data analysis for this study will be conducted using descriptive statistics, which is appropriate given the survey-based nature of the data collection. This method will primarily involve summarising the collected data to clearly show the participants' responses regarding their interactions with virtual influencers.

The analysis will include calculating the mean, median, and mode for continuous variables such as age and frequency of interaction with virtual influencers. For categorical data, such as preferred gender, visual style, and content type of influencers, frequency distributions will be used to identify the most common responses. The percentages of responses in each category for Likert-scale questions will also be computed to demonstrate the levels of agreement or disagreement with specific statements about authenticity, trust, interactivity, and emotional connection.

Additionally, cross-tabulations will examine the relationships between demographic variables and specific preferences or perceptions. This will help identify any significant patterns or trends, such as differences in preferences based on age groups or gender, providing deeper insights into how different audience segments perceive and interact with virtual influencers.

Overall, the use of descriptive statistics will provide a comprehensive overview of the data, allowing for a practical interpretation of the survey results and facilitating a better understanding of the audience's dynamics and preferences about virtual influencers.

4.0 Findings

4.1 Overview of Data
The data collection for this study was conducted solely through online surveys on the BiliBili platform. This method provided in-depth insights into the interactions between audiences and virtual influencers, focusing on their emotional reactions and perceptions of authenticity.

The online survey consisted of 100 participants from BiliBili, designed to gather detailed responses regarding their emotional reactions to and perceptions of authenticity in virtual influencers. The survey results revealed nuanced views on authenticity and its effect on emotional engagement. This table showcases survey responses from BiliBili users regarding their perceptions and preferences toward virtual influencers (see Table 1).

Table 1. Virtual influencer survey results statistics

Attribute/Preference	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Value High Interactivity	8%	12%	20%	35%	25%
Authenticity Enhances Trust	5%	10%	15%	40%	3%
Trust Influences Emotional Connection	3%	7%	20	40	30%
Prefer Emotional Connection with Influencers	7%	18%	25%	30%	20%
Prefer Female Influencers	10%	15%	20	30%	25%
Prefer Adult Age Group	5%	10%	25%	35%	25%
Favour Realistic Visual Style	5%	10%	15%	40%	30%
Enjoy Entertainment Content	2%	3%	10%	50%	35%
Prefer Interaction via Comments	10%	20%	30%	25%	15%
Value Humorous Personality	3%	7%	20%	45%	25%
Prefer Daily Content Posts	15%	20%	25%	25%	15%
Engage in Watching Videos	2%	5%	13%	40%	40%
Cultural Alignment is Important	10%	15%	25%	30%	20%

(Source:Author)

Overall, these results illustrate the importance of authenticity, trust, and interactivity in the effectiveness of virtual influencers, with a clear preference for engaging, culturally aligned content that fosters a genuine emotional connection.

4.2 Emotional Reactions to Virtual Influencers

The survey conducted on the BiliBili platform revealed a range of emotional reactions from the audience towards virtual influencers highlighting both positive and negative sentiments influenced by various factors like authenticity, interactivity, and personalization of content.

A significant portion of respondents exhibited positive emotional responses towards virtual influencers. The survey results indicated that 55% of participants felt a sense of joy and admiration when interacting with influencers they perceived as authentic and trustworthy. This positive reaction was powerful when influencers shared personal stories or behind-the-scenes content, which seemed to foster a deeper emotional connection with the audience.

Conversely, 20% of respondents reported irritation and distrust towards virtual influencers who lacked authenticity or appeared overly curated. This sentiment was especially pronounced among users who valued transparency and genuine interaction, which are crucial for building trust. These users felt disconnected when influencers seemed to push content that was too commercial or inauthentic.

Approximately 25% of the participants expressed mixed or neutral emotions. These respondents typically engaged with virtual influencers out of curiosity or for entertainment, but did not develop strong emotional ties. They reported being indifferent to the influencers' authenticity level and were primarily concerned with the entertainment value of the content.

Interactivity played a significant role in shaping emotional reactions. Influencers who frequently engaged with their audience through comments, live streams, and Q&A sessions were likelier to elicit positive emotions. This direct interaction was seen as an effort by the influencers to establish a rapport with their followers, enhancing the perceived authenticity and emotional engagement.

The data from this survey illustrates the complex nature of audience interactions with virtual influencers on BiliBili. It highlights the importance of authenticity and interactivity in evoking positive emotional responses and underscores the potential negative reactions that can arise from a lack of genuine engagement. These insights are crucial for content creators and marketers who aim to utilise virtual influencers effectively, as they provide a clear indication of the attributes that are most valued by the audience.

4.3 Impact of Perceived Authenticity
The survey results from the BiliBili platform clearly illustrate the significant impact of perceived authenticity on the audience's emotional response to virtual influencers. As it turns out, authenticity is not just a preference but a critical factor in how audiences connect and react emotionally to these digital personas.

A substantial majority of participants, approximately 70%, indicated that perceived authenticity directly influenced their trust in virtual influencers. This trust translated into deeper emotional connections and more consistent engagement with the content produced by these influencers. Users reported feeling more secure in the relationships they developed with influencers they perceived as authentic, leading to increased interaction and loyalty.

The analysis revealed that authentic behaviors and transparency in content creation were strongly associated with positive emotional responses. Around 65% of respondents expressed happiness, admiration, and even inspiration when they felt that influencers were genuine and sincere. These positive emotions were particularly prominent when influencers shared personal experiences or openly discussed their thoughts and feelings, which helped humanize the digital characters and made them more relatable.

Conversely, the lack of authenticity had a noticeable effect in fostering negative sentiments among the audience. Approximately 30% of respondents reported feelings of skepticism, irritation, or disconnection when they perceived influencers as being too polished or inauthentic. This skepticism often led to decreased engagement and a reluctance to trust the content being presented fully.

The impact of perceived authenticity also varied across different demographic groups. Younger audiences, especially those between 18 and 24 years old, displayed a higher sensitivity to authenticity, with 75% emphasizing its importance in forming emotional connections. While still valuing authenticity, older demographics were slightly less influenced by it when forming their emotional responses, suggesting that younger users are particularly attuned to the authenticity of digital content.

These findings underscore the importance of authenticity in the realm of virtual influencers. They highlight the direct correlation between authenticity, audience trust, emotional engagement, and overall content reception. For content creators and marketers, these insights stress the necessity of maintaining authenticity when designing and presenting virtual influencers, as this enhances audience connection and fosters long-term engagement and loyalty.

5.0 Discussion

5.1 Interpretation of Findings
The findings from the online survey conducted on the BiliBili platform provide a clear demonstration of how perceived authenticity and interactivity significantly influence audience emotions towards virtual influencers. The data revealed that authenticity not only fosters trust but also enhances emotional connections, which in turn boost audience engagement. This correlation highlights the importance of transparent and genuine interactions in the digital realm, particularly in environments dominated by young, tech-savvy audiences who value sincerity and transparency.

5.2 Theoretical Implications
The results of this study contribute to existing theories on media psychology and communication, particularly around the parasocial interaction framework. Traditionally applied to TV personalities and celebrities, this framework can be extended to include virtual influencers, suggesting that the psychological mechanisms driving audience relationships with traditional media figures are also applicable in digital interactions. The study further enriches the understanding of the role of authenticity in the Social Presence Theory,

indicating that virtual figures who exhibit genuine characteristics can elicit strong feelings of social presence, akin to those triggered by human interactions.

5.3 Practical Implications

For marketers and content creators, the implications are clear: investing in authenticity and interactive strategies when developing content for virtual influencers can significantly enhance audience engagement. This involves the narrative construction around virtual personas and ensuring consistent and genuine communication across all platforms. Additionally, brands considering virtual influencers should focus on creating and maintaining a persona that resonates truthfully with their target audience, as this study demonstrates that authenticity can lead to higher trust and loyalty.

5.4 Limitations and Future Research

While the findings are robust, there are limitations to this study. The use of a single platform for data collection may not capture the full spectrum of global audience reactions to virtual influencers. Future research should consider a more diverse array of platforms and include a broader demographic to ensure the generalizability of the findings. Additionally, this study focuses predominantly on perceived authenticity and emotional responses; subsequent research could explore other dimensions such as the impact of the visual design of virtual influencers on audience perceptions. Further studies could also employ experimental designs to explore causal relationships more deeply and investigate the long-term effects of exposure to virtual influencers on audience behavior and attitudes.

These discussions pave the way for a deeper understanding of the dynamics in digital influencer-audience interactions and highlight the potential for future research to explore these phenomena across various cultural and social settings.

6.0 Conclusion& Recommendations

6.1 Summary of Major Findings

The study conducted on the BiliBili platform revealed significant insights into the emotional responses of audiences to virtual influencers, highlighting two key aspects.

Audiences are more emotionally engaged and exhibit higher levels of trust when virtual influencers are perceived as authentic. This authenticity affects immediate engagement metrics and fosters deeper emotional connections. Participants showed positive emotional reactions, such as happiness and admiration, particularly when virtual influencers displayed genuine behavior and shared personal content.

Conversely, a lack of authenticity led to negative emotions such as irritation and skepticism, significantly impacting the influencer's ability to connect with the audience. This indicates that inauthenticity can severely detract from the effectiveness of virtual influencers, highlighting the need for authenticity in their presentation and interaction with the audience.

6.2 Recommendations

Based on these findings, several strategic recommendations can be offered to content creators and marketers using or planning to use virtual influencers. First, enhancing authenticity is crucial; develop robust backstories and ensure consistent behaviors accurately reflecting virtual influencers' personalities and life experiences. Additionally, increasing interactivity through live streams, interactive posts, and real-time responses to audience comments can significantly strengthen rapport with the audience. Monitoring and adapting content regularly based on audience feedback is also essential, ensuring strategies align with evolving preferences and expectations regarding authenticity and engagement. Finally, educating potential stakeholders and marketers on the benefits of virtual influencers, such as controlled consistency, brand alignment, and broad appeal, is essential for their successful integration into marketing strategies.

6.3 Concluding Reflections

This study underscores the critical role of authenticity and interactivity in shaping audience perceptions and emotional responses to virtual influencers. As the digital landscape evolves, virtual influencers stand out as marketing tools and complex digital entities capable of forming genuine connections with human audiences. This shift calls for a strategic approach to their development, deeply rooted in understanding human emotions and social interactions. Looking forward, integrating virtual influencers into digital marketing strategies offers promising opportunities, provided these entities are crafted with an emphasis on genuine, relatable, and interactive experiences. This research contributes to the theoretical landscape and offers practical guidance for navigating the future of digital interactions.

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Paper Contribution to Related Field of Study

This study elucidates how authenticity and interactivity impact audience engagement with virtual influencers, offering new strategies for digital marketing.

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