

Virtual Influencers: The impact of cultural intelligence on perceived credibility

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This study examines the role of cultural intelligence in shaping the perceived credibility of virtual influencers within digital marketing. Through a quantitative analysis of international survey data, findings reveal that virtual influencers exhibiting higher metacognitive and behavioral cultural intelligence significantly enhance their credibility among consumers. These insights suggest that integrating cultural intelligence into virtual influencers development can bolster consumer trust, pointing to a strategic direction for marketers in leveraging AI with cultural sensitivity. The research underscores the transformative potential of culturally intelligent virtual influencers in digital marketing, contributing to a deeper understanding of consumer engagement strategies in a diverse global marketplace.

Cultural Intelligence, Virtual Influencers, Credibility

1. Introduction

The relentless march of digitalization has dramatically reshaped our private and professional lives, introducing innovative paradigms in communication, commerce, and the sphere of consumer engagement. At the vanguard of these changes stands influencer marketing, which has adapted to become a more nuanced form of digital interaction and a key driver of value creation (Thomas & Fowler, 2021). This transformative evolution is marked by the advent of virtual influencers – artificial intelligence (AI)-driven avatars that interact with audiences across diverse social media platforms (Virtual Humans, 2024). Despite their innovative presence, research that delves into understanding the dynamics of virtual influencers, particularly through the prism of cultural intelligence, is still in its infancy (Brennen & Kreiss, 2016; Söderholm et al., 2018).

Virtual influencers, devoid of intrinsic human qualities such as the ability to naturally adapt and resonate across varied cultural contexts, confront unique challenges in establishing authenticity and credibility. These challenges are critical in assessing the potential of virtual influencers to engage effectively with a global audience. The credibility of these digital personas, which is central to their ability to influence, is contingent upon their capacity to display behaviors that are perceived as culturally intelligent – an aspect not yet fully explored in depth (Belanche et al., 2021; Lou & Yuan, 2019). The central question it addresses is how virtual influencers can utilize cultural intelligence to boost their effectiveness in influencer marketing strategies that cater to diverse global audiences.

This study employs quantitative methodologies, including correlation and regression analyses of data collected via an online survey across various culture clusters, to explore the intricate relationship between a virtual influencer's cultural intelligence and their perceived credibility. The preliminary results affirm that metacognitive cultural intelligence significantly influences perceived competence and character in virtual influencers, while the cognitive and motivational dimensions of cultural intelligence impact perceptions of character (Zhou et al., 2021). Additionally, behaviors reflective of cultural intelligence are linked to the perceived composure of virtual influencers. These findings reinforce the notion that cultural intelligence is instrumental in enhancing specific dimensions of a virtual influencer's credibility, albeit partially supporting the proposed hypotheses.

This exploration is the first study, to the researcher's knowledge, to place virtual influencers under the lens of cultural intelligence within the field of digital marketing research. It seeks to contribute to the body of knowledge by providing empirical evidence on the relevance of cultural intelligence in shaping the perceived credibility of virtual influencers and by offering practical insights that may guide stakeholders in the realm of digital marketing.

2. Literature and theoretical review

The burgeoning integration of social media ubiquity and AI has reshaped the landscape of influencer marketing (Davenport et al., 2020; Dwivedi et al., 2021). This chapter synthesizes the current literature and theoretical frameworks that underpin virtual influencer marketing, source credibility, and the construct of cultural intelligence, setting the stage for examining their interplay.

2.1. Virtual influencer marketing

The evolution of influencer marketing has seen a progression from celebrity endorsements to leveraging online personalities with substantial followings, changing the way brands connect with their audiences (McCracken, 1989). With the rise of social media, this landscape has expanded to include virtual influencers – computer-generated entities capable of emulating human influencers (Virtual Humans, 2024). These digital personas are engineered to engage with users on social media platforms, offering a degree of control and consistency in message delivery that human influencers cannot match (Conti et al., 2022; Robinson, 2020). Virtual influencers mitigate many of the risks inherent in partnering with human influencers, such as unpredictability and the potential for public relations challenges. Forecasts suggest that investments in influencer marketing are set to increase, with significant budget allocations pointing to the strategic importance of this marketing method (Ki et al., 2020). However, the novelty of virtual influencers also introduces ambiguities regarding their authenticity and credibility across cultures, presenting an emergent area of study that this paper seeks to explore.

2.2. Source credibility

In the intricate web of digital communication, the credibility of the source is paramount. It serves as a linchpin in the relationship between influencers and their audiences, shaping the perceptions and actions of consumers (Hovland & Weiss, 1951). In an era where social media users are bombarded with content, the credibility of virtual influencers becomes a make-or-break factor in their efficacy as endorsers. Source credibility, deeply rooted in the seminal work of Hovland and Weiss (1951), is the perceived trustworthiness and expertise attributed to a communicator. These dimensions are foundational to the acceptance and impact of their messages (Erdogan, 1999). Credibility is not a monolith; it is a multifaceted construct that has evolved through various models and studies to encapsulate dimensions such as trustworthiness, competence, sociability, composure, and extroversion (Eisend, 2006; McCroskey & Jenson, 1975). The transition from human to virtual influencers introduces new complexities in the application of traditional source credibility models. Virtual influencers, devoid of human experiences and emotions, must convey credibility through artificial means. The challenge is to ensure that these digital entities are perceived as competent and trustworthy sources of information, capable of engaging with audiences on a personal level (Knoll & Matthes, 2017). As virtual influencers gain prominence, their credibility is scrutinized through the lens of their constructed personalities and the authenticity of their interactions. The credibility of virtual influencers, therefore, is not only about the information they provide but also about the narratives they weave and the cultural contexts they navigate. This is especially pertinent as they attempt to foster relationships with consumers who are increasingly discerning about the sources of their information (Belanche et al., 2021).

2.3. Culture clusters and cultural intelligence

The influence of culture on consumer behavior and decision-making is profound, necessitating a tailored approach in marketing communication to resonate with diverse

audiences. Hofstede's model of national culture and the GLOBE study provide frameworks to dissect and understand cultural influences on perception and behavior (Hofstede, 2001; House et al., 2004). These models are especially relevant to the realm of virtual influencers, where content and persona must be crafted to align with the cultural expectations and norms of various audience segments. Additionally, cultural intelligence has been identified as a significant predictor of effectiveness in diverse cultural contexts. Earley and Ang (2003) define cultural intelligence as a person's capability to function effectively in situations characterized by cultural diversity. It includes metacognitive, cognitive, motivational, and behavioral components, each crucial for engaging with cultural differences (Ang, Rockstuhl, & Tan, 2015). For virtual influencers, cultural intelligence represents an aggregated attribute of their development teams, influencing how virtual influencers' personalities are crafted and perceived across cultures.

2.4. Research gaps and hypotheses

Current literature on virtual influencers has predominantly focused on their technological aspects, often overlooking the influence of cultural dynamics (Brown, 2020; Hofeditz et al., 2022). There is also a lack of understanding regarding how virtual influencers' cultural intelligence might impact their credibility. This study seeks to fill this gap by examining this relationship. Hence, the hypotheses developed for this research are:

- H0: There is a positive relationship between a virtual influencer's cultural intelligence and its perceived credibility.
- H1: Metacognitive cultural intelligence positively impacts perceived competence, character, sociability, composure, and extroversion.
- H2: Cognitive cultural intelligence positively impacts perceived competence, character, sociability, composure, and extroversion.
- H3: Motivational cultural intelligence positively impacts perceived competence, character, sociability, composure, and extroversion.
- H4: Behavioral cultural intelligence positively impacts perceived competence, character, sociability, composure, and extroversion.

These hypotheses are visually represented in a research model (Figure 1). The findings from testing these hypotheses will offer actionable insights into the development of culturally intelligent virtual influencers, which could potentially redefine industry standards for credibility in digital marketing.

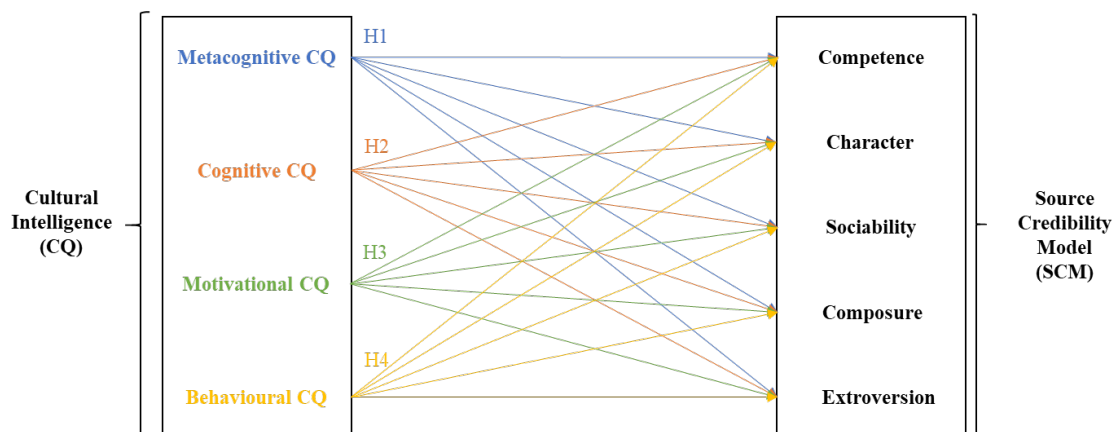


Figure 1: Research Model - own illustration

3. Research design and methods

Given the pioneering nature of this research within the digital marketing domain, the study employs a structured exploratory approach, leveraging both secondary sources for theoretical grounding and primary data to test the proposed hypotheses.

This study asserts that credible data emerge from observable phenomena – akin to natural laws. This philosophy is coupled with an objective stance, ensuring that the investigation remains free from the researcher's subjective values. The positivist approach's structured nature lends itself to quantifiable observations that facilitate statistical analyses, thereby allowing for replication and validation of findings (Alharahsheh Husam Helmi & Pius Abraham, 2020; Saunders et al., 2012). Our deductive research approach, informed by two well-established theoretical models, utilizes quantitative methods to test the hypotheses outlined in section 2. The online survey strategy, selected for its reach and anonymity, aims to minimize interviewer bias and maximize data reliability across cultures. The study's design – its transparency and adherence to established constructs – promotes both internal and external validity, ensuring that the research aligns with the quality criteria for positivist inquiry (Saunders et al., 2012).

The survey targets Miquela Sousa, a prominent virtual influencer, to investigate the hypotheses concerning the impact of virtual influencers' cultural intelligence on their perceived credibility. This focus allows for a specific examination of virtual influencers within the context of a platform with substantial market power, Instagram, with its two billion monthly active users (Statista, 2024). The survey targets a global audience, with an emphasis on individuals aged 18 and above who demonstrate an openness to technological advancements, ensuring the relevance and robustness of the data. The diverse cultural perspectives of the international sample are particularly critical to the study, hence, the survey was distributed globally and reached out to African, American, Arab, Asian, and European cultures thereby reflecting a good mixture of cultural clusters. SoSci-Survey software underpins the survey administration, ensuring data security and providing a user-friendly interface. The questionnaire, made available in English, was designed to be comprehensive yet concise, with a completion time of under ten minutes. A mix of closed and open-ended questions facilitates a rich dataset, catering to both quantitative analysis and qualitative insights (Lefever et al., 2007; Raithel, 2008). The survey underwent rigorous back-translation for accuracy, and a pre-test was conducted to refine question clarity and technical functionality. Adjustments post pre-test (n=4) included the enhancement of visual elements and the inclusion of additional information to aid comprehension, ensuring an optimized data collection process (Weichbold, 2022).

To translate the theoretical constructs into measurable variables, a meticulous operationalization process was undertaken. Questions were classified into independent and dependent variables, with existing scales from prior research adapted for use in this study (Andrade, 2021; Rohrmann, 1978). Well-established constructs for assessing the two theoretical frameworks, source credibility and cultural intelligence, were employed, drawing from seminal works in the field (Ang, van Dyne, & Rockstuhl, 2015; McCroskey & Jenson, 1975). This approach not only enhances the validity of the survey but also grounds the study in a strong theoretical foundation (see Table 1 for an overview of operationalized constructs).

Table 1: Operationalisation of Constructs

Constructs				
# Q	Variable	Item	Scale	Source
3	Frequency of Influencer Marketing	Frequency	1 = Multiple times a day 5 = Less frequent than weekly	Cf. Rohrmann, 1978
4	Purchasing Decision	Frequency	1 = Never - 5 = Always	Cf. Rohrmann, 1978
5	Importance of cultural divers SMI's	Intensity	1 = Not at all - 5 = Very	Cf. Rohrmann, 1978
9	Perception of Miquela Sousa	Account uniqueness	1= strongly disagree 7= strongly agree	Cf. Casalo et al., 2020
		Responsibility		Cf. Thomas & Fowler, 2021
		Value Relevancy		Cf. Casalo et al., 2020
		Personality Match		
		Trust in Suggestions		
Future usage				
10	Source Credibility	Competence	Unqualified - Qualified	Cf. McCroskey & Jenson, 1975
			Unreliable - Reliable	
			Unbelievable - Believable	
		Character	Unsympathetic - Sympathetic	
			Selfish - Unselfish	
			Sinful - Virtuous	
		Sociability	Unfriendly - Friendly	
			Irritable - Good Natured	
			Unsociable - Sociable	
		Composure	Excitable - Composed	
			Tense - Relaxed	
			Nervous - Poised	
Extroversion	Timid - Bold			
	Introverted - Extroverted			
	Quiet - Verbal			
10	Cultural Intelligence	Metacognitive	1= strongly disagree 7= strongly agree	Cf. Earley & Ang, 2003
		Cognitive		
		Motivational		
		Behavioural		

4. Analysis and discussion

The exploration of Miquela Sousa's perceived credibility and the role of cultural intelligence in shaping this perception has yielded nuanced findings. The data drawn from a demographically diverse sample (total n=111, after data cleansing n=85) reflects a predominance of the digital native cohort (M=29.93, SD=9.10), providing a relevant base for the investigation into the influence of cultural intelligence on perceived credibility. Gender representation skews towards female respondents (64%), indicative of the primary audience engaging with social media influencers. The application of the GLOBE Study framework for cultural classification indicates a majority representation from European (Latin, Nordic, German, Eastern) cultures (75%), followed by Asian cultures (12%), Anglo-American cultures (6%) and 3% African and 3% Arab cultures. While this provides a strong regional perspective, it prompts considerations of how cultural biases might influence the generalizability and interpretation of virtual influencers' credibility across cultures. Engagement with social media, particularly Instagram, remains high (M=1.75, SD=1.12), supporting its preeminent status in digital marketing. The relatively low active following of virtual influencers (2%), compared to a significant familiarity with traditional influencers (83%), underscores an opportunity for virtual influencers to expand their influence within this space. Miquela Sousa's moderate levels of perceived metacognitive cultural intelligence

(M=4.76) and behavioral cultural intelligence (M=4.90) suggest that audiences are somewhat receptive to her as a culturally intelligent entity, yet cognitive cultural intelligence (M=3.81) appears to be an area where virtual influencers can improve to resonate more deeply with culturally diverse audiences. The neutral perception of cognitive cultural intelligence highlights a gap between mere cultural awareness and the depth of cultural understanding that engenders trust and authenticity. The survey participants' perceptions of source credibility dimensions – competence (M=3.67), character (M=4.12), sociability (M=4.99), and extroversion (M=5.18) – reveal an intricate picture of virtual influencers' effectiveness. Skepticism towards Miquela's competence may reflect broader questions about the authenticity and reliability of virtual influencers as a whole. Positive ratings in sociability and extroversion suggest that her digital persona is viewed as engaging and friendly, which are vital traits for audience retention. Significant correlations found between cultural intelligence dimensions and source credibility aspects (e.g., metacognitive cultural intelligence's correlation with competence and character) reinforce the importance of cultural adaptability. However, the varying degrees of correlation across different dimensions suggest that the influence of cultural intelligence on perceived credibility is not uniform, implying that other factors such as engagement strategies and content relevance also play critical roles.

This integration of analysis and discussion reflects on how the authenticity of virtual influencers is pivotal in audience engagement and trust-building, with metacognitive cultural intelligence emerging as a key factor in enhancing credibility. The discussion further ventures into the implications for virtual influencer creators and brand collaborations, emphasizing strategic cultural intelligence incorporation and careful virtual influencer selection based on audience expectations.

Table 2: Main Results of the Regression Analyses

Main Results of the Regression Analyses	Model 1	Model 2	Model 3	Model 4	Model 5
	Competence	Character	Character	Character	Composure
	β (SD)	β (SD)	β (SD)	β (SD)	β (SD)
Independent Variable					
Meta Cognitive CQ	0,345** -0,108	0,296** -0,11			
Cognitive CQ			0,256* -0,111		
Motivational CQ				0,228* -0,112	
Behavioural CQ					0,233* -0,112
R2	0,199	0,088	0,066	0,052	0,054
adjusted R2	0,108	0,076	0,053	0,039	0,042
F	10,296	7,316	5,331	4,162	4,362
P	0,002	0,008	0,024	0,045	0,04
Notes: N=78; * < p=0,05; ** < p=0,01					

5. Conclusion and outlook

By investigating Miquela Sousa's perceived credibility and the role of cultural intelligence in shaping this perception, this study has illuminated the multifaceted relationship between

virtual influencers, their audience, and the cultural dynamics at play. The investigation achieved its first objective by providing an in-depth analysis of Miquela Sousa's content, offering nuanced insights into her credibility from the consumer perspective. Although the overall distinction in her credibility was moderate, it underscores the potential for virtual influencers to be perceived as credible sources, contingent upon strategic enhancements in their presentation and engagement strategies. For an authentic marketing campaign, brands are hence urged to predefine key cultural factors for successful virtual influencer collaboration. The exploration into Miquela's cultural intelligence, while revealing only marginal differences, highlighted the significance of certain cultural intelligence aspects, particularly tackling the cognitive intelligence, in fostering authenticity and trust. This underscores the potential of culturally intelligent marketing actions in enhancing a virtual influencer's credibility and the need for a nuanced understanding of how these actions are perceived across different cultures. Significantly, the study identified specific relationships between dimensions of cultural intelligence and aspects of source credibility, underscoring the complex interplay between these constructs. While the main hypothesis was rejected, the identification of significant correlations provides a foundation for further exploration into the mechanisms through which cultural intelligence influences credibility. The concept of cultural influencers, as extrapolated from the findings, represents a transformative potential for virtual influencers in the realm of social media marketing. The ability of virtual influencers like Miquela Sousa to adapt content to cultural nuances, advocate for social causes, and promote inclusion highlights the unique value they can offer. As virtual influencers evolve, particularly through advancements in AI, there lies an opportunity for them to transcend traditional influencer roles, becoming pivotal agents in bridging cultural divides and shaping societal norms.

The exploration of virtual influencers and their capacity as cultural influencers opens several avenues for future research. The study has not only revealed the limited consumer awareness of virtual influencers, but also sheds light on investigating the potential of AI to learn and implement cultural intelligence in real-time, adapting to the fluid dynamics of global cultures, stands as a critical area of inquiry. This future research could significantly impact how virtual influencers are designed, programmed, and deployed, ultimately enhancing their effectiveness as cultural ambassadors in digital marketing campaigns. This study posits that with increased authenticity and credibility, virtual influencers have the potential to rival or even surpass human social media influencers in their effectiveness and value creation within social media marketing. The agility of virtual influencers in adapting to the rapid changes in digital communication and marketing strategies presents a unique advantage over human influencers. The extent to which virtual influencers can influence consumer behavior and brand perception, matching or exceeding human social media influencers, remains an intriguing prospect for future investigation.

In conclusion, this study has laid the groundwork for understanding the impact of cultural intelligence on the credibility of virtual influencers. It has revealed the complexities of this relationship, and highlighted the potential of virtual influencers to serve as transformative figures in the landscape of social media marketing. As we look to the future, the evolution of virtual influencers, underpinned by advancements in AI and a deeper integration of cultural intelligence, promises to redefine the boundaries of influence, authenticity, and cultural connectivity in the digital age.

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