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International Comparison of the Personalization Effects of Information Provision in Tourism Video Promotions Utilizing Digital Avatar

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ABSTRACT

In the tourism industry, as the international tourism market expands, digital avatars that can be adjusted in terms of language and appearance to match the target audience are likely to be widely used in tourism video promotions. However, the persuasiveness of video marketing utilizing digital avatars has not been sufficiently examined. Therefore, this study sets the following research question: In tourism video promotions, how persuasive are digital avatars compared to real people, and what are the effects of personalization in information transmission? With a focus on inbound tourism, this study collects data from residents in Japan and US, through a web-based survey promoting tourist attractions in Kyoto, Japan. The main findings indicate that, for Japanese audiences in Tokyo, both real-person and digital avatar video promotions showed positive effects of personalization. On the other hand, for US audiences, personalization in both real-person and digital avatar video promotions resulted in negative effects. These findings suggest that in tourism video promotions using digital avatars, the impact of personalization varies across cultures, highlighting the need to develop culturally optimized strategies.

Keywords: Tourism video promotion, Digital avatar, Personalization

INTRODUCTION

Research on the effectiveness of advertising endorsements by social media influencers is progressing in the field of marketing. Social media influencers have built their careers by accumulating expertise in specific fields. As the influence of social media continues to grow, information shared by social media influencers based on their own experiences may be more trusted by consumers than traditional advertisements featuring celebrities.

In recent years, with the advancement of artificial intelligence (AI) and robotics, research on the utilization of automation technology in marketing has begun to be reported (Hoyer et al., 2020). Based on programming, the use of service robots and chatbots that interact with customers has been increasing. In this way, the development of AI technology is expected to play a crucial role in automated marketing initiatives.

In particular, as a technology applicable to influencer marketing, the use of generative AI enables information dissemination through digital avatars and synthetic voices, utilizing artificial objects. Generative AI, based on pre-training with vast amounts of data, can generate not only text but also images and videos, making it easier to create artificial objects resembling real individuals, known as digital avatars. In Japan, initiatives using generative AI-powered avatars for information dissemination by local governments have already been reported.

However, despite the diverse applications of AI marketing, AI technology primarily focuses on enhancing the cognitive and behavioral aspects of customer experience, while its impact on social relationships has not been sufficiently investigated (Liu-Thompkins, Okazaki, and Li, 2022). Current AI marketing agents are often perceived as cold and lacking empathy, and they are not considered viable replacements for human-based interactions (Luo, 2019; Mende, 2019).

Therefore, this study sets the following research question: From the perspective of influencer marketing, which evaluates the persuasiveness of human advertising, what is the structure of digital avatars' persuasiveness in tourism video promotions, and what are the effects of personalization in information transmission? By addressing this question, this study aims to provide insights that effectively support decision-making regarding the use of digital avatars and the personalization of their explanations in video promotions for products and services from an influencer marketing perspective.

As a specific approach, this study establishes a research model based on hypotheses derived from influencer marketing research. The hypotheses posit that the similarity between the advertising presenter and the viewer, as well as the physical attractiveness of the presenter, influence the viewer's intention to visit a tourist facility through the presenter's credibility and the development of a parasocial relationship, which represents a pseudo-human relationship. To explore this, considering the expansion of inbound tourism, a web survey will be conducted targeting tourism facilities in Kyoto, Japan. Data will be collected from both Japanese participants (residing in Tokyo) and the US participants. The digital avatar used in the study will be created from the video of a Japanese collaborator, while the voice will be generated synthetically in both Japanese and English as well.

LITERATURE REVIEWS AND HYPOTHESIS DEVELOPMENT

Currently, social media influencers, who are influential figures on social networks, play a crucial role in marketing by promoting products and services to their audience. Various studies have demonstrated that key constructs such as the trustworthiness and expertise of influencers, as well as parasocial relationships (PSR)—a pseudo-human relationship between the influencer and the audience—positively impact marketing outcomes, including purchase intentions (Masuda, Han, and Lee, 2022, etc.). However, when companies use technologies such as AI and robots to anthropomorphize objects for promoting their products and services, the effects of PSR on these

anthropomorphized objects and their impact on marketing outcomes remain insufficiently explored (Masuda, Han, and Lee, 2022).

The role of interpersonal interactions in influencing customer satisfaction has been recognized in extant literature on service marketing (Mittal, 1996). In particular, high-quality service is often perceived as more personalized service (Suprenant and Solomon, 1987). Personalization refers to the social aspects of interactions between service employees and customers, specifically how service employees engage with customers (Mittal, 1996). Regarding personalization by AI agents, research on how variations in AI agents' personalized behavior and personality differences affect the empathetic capabilities of social robots remains insufficiently explored (Park, 2022).

This study builds upon extant literature on influencer marketing to formulate the following hypotheses regarding video promotions for tourist attractions and presents them in a research model: H1) The perceived trustworthiness of the video presenter positively influences the intention to visit the promoted tourist attraction; H2) PSR with the video presenter positively influences the intention to visit the promoted tourist attraction; H3a) The similarity between the information sender and the viewer positively influences the trustworthiness of the video presenter; H3b) The similarity between the information sender and the viewer positively influences PSR with the video presenter; H4a) The physical attractiveness of the information sender positively influences the trustworthiness of the video presenter; H4b) The perceived physical attractiveness of the information sender positively influences PSR with the video presenter.

METHODOLOGY

This study investigates the impact of utilizing digital avatars and personalizing the tone of explanations generated by AI in video promotions for tourist attractions, based on the proposed research model. Specifically, to measure marketing effectiveness, an experiment was conducted by categorizing different information delivery methods. The study focused on a well-known tourist attraction in Kyoto, Yamaguchi Family Residence - Taikokyo, and created a digital avatar of a collaborator as the presenter. The following groups were set for comparison: Group 1) Standardized information delivery, employing the presenter and their natural voice; Group 2) Personalized tone of explanation, employing the presenter and their natural voice; Group 3) Standardized information delivery, employing the presenter's digital avatar and AI-generated voice; Group 4) Personalized tone of explanation, employing the presenter's digital avatar and AI-generated voice.

In the promotional videos used in this study, two types of videos were utilized: one featuring the presenter explaining directly, and another using a digital avatar and AI-generated voice created from the presenter's original video. For the selected tourist attraction, approximately one-minute videos were produced for each comparison group, with the presenter providing explanations over footage of the location. As for the personalization of tone, explanation texts were generated using GPT-4, a large language model

(LLM), based on a 2×2 types along two axes: formal-casual and rational-emotional, resulting in four different tone types. Prior to the main experiment, participants were shown PR texts for five different products and services that had been converted into the four tone types by the AI. They were asked multiple times to indicate which version they preferred. Based on these responses, the participant's tone preference for PR texts was identified. The personalization in this study was achieved by using videos with explanation texts tailored to each participant's preferred tone for the tourist attraction.

In this study, measurement items for each component of the research model were adopted from extant literature and modified to fit the context of this study. All items were measured using a five-point Likert scale ranging from "strongly disagree" to "strongly agree." As an experimental scenario, participants were asked to watch a one-minute promotional video of a tourist facility in Kyoto, after which they responded to a questionnaire designed based on the research model. Based on relevant literature, Similarity was measured using four items from, Physical attractiveness was measured using four items, Trustworthiness was measured using three items, PSR was measured using five items, and Visit intention, as an outcome of marketing outcome, was measured using two items.

Based on the proposed research model, a web-based survey was created to test the hypotheses. For the Japanese data, the survey was conducted in October 2024 through a research company with a panel of respondents, targeting residents of Tokyo. After screening the responses, 220 valid responses were obtained. For the American data, the survey was conducted in January 2025 via the crowdsourcing service Amazon Mechanical Turk. After screening the responses, 207 valid responses were obtained.

In this study, structural equation modeling based on partial least squares (PLS-SEM) was used to test the hypotheses. There are two types of structural equation modeling (SEM): covariance-based (CB) and PLS (Hair et al., 2019). PLS-SEM, which employs an iterative algorithm based on a series of least squares regressions, does not require assumptions about the distribution of observed variables and enables robust estimation even with small sample sizes. This study adopted the PLS-SEM approach because of its high flexibility regarding the distribution of measurement data and its ability to provide robust estimation results even when the sample size is limited.

RESULT

Structural equation modeling using PLS-SEM was conducted in this study. In the first part of the PLS-SEM analysis, the measurement model was evaluated for each construct and its corresponding items. In the latter part of the analysis, the hypotheses were tested based on the proposed research model. Finally, differences were compared based on the results of each experimental group.

Table 1 summarizes the results of hypothesis testing using the research model for each experimental group based on data from Japanese residents in Tokyo, while Table 2 presents the corresponding results for U.S. residents. The experimental groups are defined as follows for both Japan and the U.S.:

Group 1: Standardized information delivery using the explainer's real image and voice; Group 2: Personalized tone of explanation using the explainer's real image and voice; Group 3: Standardized information delivery using the explainer's digital avatar and synthetic voice; Group 4: Personalized tone of explanation using the explainer's digital avatar and synthetic voice.

Next, the regression coefficients between Group 1 and Group 2, as well as between Group 3 and Group 4, were compared to examine the effects of personalization. The main findings indicated that, for the Japanese sample, a positive effect of personalization was observed in both the real-person and digital-avatar promotional video conditions. In contrast, for the U.S. sample, personalization generally showed negative effects in both the real-person and digital-avatar video conditions, with a few exceptions.

Table 1: Results of hypothesis testing (Japanese sample).

		Group 1		Group 2		Group 3		Group 4	
	Hypotheses	**B**	**Result**	**B**	**Result**	**B**	**Result**	**B**	**Result**
H1	Trustworthiness → Visit Intention	0.129	R	−0.118	R	0.167	R	0.230*	A
H2	PSR → Visit Intention	0.556***	A	0.618***	A	0.535***	A	0.576***	A
H3a	Similarity →Trustworthiness	0.037	R	0.305	R	0.031	R	0.344**	A
H3b	Similarity → PSR	0.356**	A	0.476**	A	0.308*	A	0.412**	A
H4a	Physical Attractiveness →Trustworthiness	0.549***	A	−0.069	R	0.345*	A	0.226	R
H4b	Physical Attractiveness → PSR	0.295*	A	0.106	R	0.455***	A	0.363*	A

Note ***: $p < 0.001$; **: $p < 0.01$; *$p < 0.05$; A = Accepted; R = Rejected

Table 2: Results of hypothesis testing (Japanese sample).

		Group 1		Group 2		Group 3		Group 4	
	Hypotheses	**B**	**Result**	**B**	**Result**	**B**	**Result**	**B**	**Result**
H1	Trustworthiness → Visit Intention	0.340**	A	0.275	R	0.113	R	0.394*	A
H2	PSR → Visit Intention	0.393**	A	0.279	R	0.435**	A	0.297	R
H3a	Similarity →Trustworthiness	0.425**	A	0.173	R	0.260*	A	0.409*	A
H3b	Similarity → PSR	0.446*	A	0.326*	A	0.255	R	0.505***	A
H4a	Physical Attractiveness →Trustworthiness	0.447***	A	0.495*	A	0.467***	A	0.218	R
H4b	Physical Attractiveness → PSR	0.242	R	0.498**	A	0.333*	A	0.146	R

Note) ***: $p < 0.001$; **: $p < 0.01$; *$p < 0.05$; A = Accepted; R = Rejected

DISCUSSION

This study yielded two main findings. The first key finding is that, for Japanese participants, personalization had a positive effect in both real-person and digital-avatar promotional video conditions. The second key finding is that, for American participants, personalization generally had negative effects in both real-person and digital-avatar video conditions, with a few exceptions.

The novelty of this study lies in demonstrating that, in video marketing, current digital avatar technology shows minimal visual differences compared to real humans, but the personalization of synthetic voice has varying persuasive effects depending on cultural context - specifically, between Japanese and American audiences. While personalization can be implemented in various ways, it is essential to examine how its effectiveness differs across cultures.

The theoretical implication of this study is that by combining digital avatars, synthetic voice, and personalized phrasing tailored to the audience, it is possible to apply theoretical models of influencer marketing to the use of AI-driven anthropomorphized automation technologies.

On the other hand, a limitation of this study is that it did not comprehensively examine the differences in marketing effectiveness arising from variations in digital avatars, synthetic voices, and cultural backgrounds of the target audience. Future research should analyze the effects of digital avatars, synthetic voice, and personalization in video promotions under various conditions. Such investigations will enable the development and validation of theoretical frameworks that support corporate decision-making in designing and delivering effective video promotions using digital avatars.

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