



INTEGRATING CULTURAL NARRATIVES INTO SUBWAY ADVERTISING: ENHANCING URBAN IDENTITY AND BRAND PERCEPTION

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Abstract:

This research reviews the potential of metro advertising as a medium for showcasing urban culture and facilitating cultural exchange. First, it introduces the significance of metro advertising as a carrier of cultural communication, emphasizing the practical value of exploring the use of cultural symbols, regional characteristics, and city branding strategies. Subsequently, the theoretical frameworks are systematically reviewed, focusing on the design challenges in multicultural contexts, particularly the effective use of cultural symbols to ensure clear communication and avoid cultural misunderstandings. Based on an analysis of domestic and international research, this study further examines the role of metro advertising in promoting intangible cultural heritage, enriching cultural experiences, and enhancing cultural identity. Finally, integrating advancements in digital technology and interactive formats, the study proposes future trends and innovative approaches for metro advertising to foster urban cultural identity. This research aims to provide a reference for metro advertising design and cultural communication studies, offering new insights into strengthening urban cultural identity.

Keywords:

Subway Advertising, Cultural Elements, Cultural Transmission, City Branding

Introduction

In contemporary cities, subway systems are not only the backbone of modern urban transportation but also key platforms for cultural dissemination(Liu, Yan, Sun, & Song, 2025; Zhu, Chen, & Yang, 2023). Currently, subway systems operate in 193 cities across 56 countries(Abdallah, 2023) , forming an essential part of urban transit(Ermagun, Tajik, Janatabadi, & Mahmassani, 2023). By 2019, global subway networks transported approximately 190 million passengers daily, with cities in the Asia-Pacific region leading in both scale and utilization(W. Zhang, Zhao, Zhao, Lin, & Zhou, 2019). In high-density cities such as London, Paris, Tokyo, and Seoul, subways handle significant passenger volumes, accounting for 25% to 50% of commuter travel(Cui, Nelson, Beecroft, & Lin, 2024; Kwon, Oh, Choi, & Kim, 2023). As part of this system, subway advertising has transcended its traditional role as a channel for commercial information, becoming a distinctive medium for showcasing local culture and enhancing urban branding(Reis, 2024; Wan & Li, 2024).

With its unique spatial characteristics and frequent exposure, subway advertising effectively conveys cultural messages, fosters urban cultural identity, promotes city branding, and establishes a cultural symbol of the city in the minds of both residents and visitors(Q. Zhang, Yan, Sun, & Liu, 2023). As advertising design concepts continue to evolve, cultural storytelling has emerged as a crucial element in advertising communication, especially in multicultural and cross-cultural urban environments(da Mota, 2024; Said, 2025). By integrating emotions and symbols, cultural storytelling communicates a city's historical background, values, and social characteristics, thereby enhancing audiences' sense of identification with the city(Rivero Moreno, 2020). Incorporating cultural narratives into subway advertisements not only immerses viewers in the city's distinctive cultural atmosphere but also helps them better understand and connect with the city's history and aspirations for the future(Xiao, Liu, & Xu, 2023).

However, despite the growing importance of subway advertising in cultural dissemination, designing ads that balance cultural elements with advertising objectives remains a complex and challenging task(Pandey, 2024; Xiao et al., 2023). Incorporating cultural elements requires designers to possess cross-cultural sensitivity and to consider the diversity of audience backgrounds(Akintayo, Eden, Ayeni, & Onyebuchi, 2024). Audiences from different cultural contexts may interpret symbols, language, and visual elements differently (Akintayo et al., 2024; Xie, Yasin, Alsagoff, & Hoon, 2022). Poorly executed designs can lead to cultural misinterpretation or communication failure(Moore, 2010; Suleiman, Almasaeid, Hussein, & Abahre, 2023). Consequently, the effective integration of cultural storytelling into subway advertising and its ability to convey urban brand identity constitute key research challenges.

This study aims to explore how subway advertisements can enhance urban cultural identity through cultural storytelling while providing theoretical insights for city branding. By reviewing existing theories on cultural branding and advertising communication, along with analyzing practical case studies, this research examines the application of cultural storytelling in subway advertising and its role in fostering cultural dissemination and brand recognition. Furthermore, the study investigates how cultural storytelling improves the effectiveness of subway advertisements, particularly in the context of advancements in digital technology and interactive advertising. It also considers how emerging technologies can enhance the depth and breadth of cultural communication(Al-khresheh, 2024).

This study focuses on the following four research questions:

1. How can metro advertising use cultural symbols and city branding to promote city culture, avoid misunderstandings, and strengthen commuters' cultural identity in a multicultural context?

2. What are the new approaches and trends in using metro advertising to promote intangible cultural heritage and urban cultural experiences in the digital and interactive era?

The next section outlines the methodology employed in this research. Key findings regarding the role of subway advertising in cultural dissemination and brand identity are presented in Section 3 and further discussed in Section 4. Finally, the paper concludes in Section 5 with a summary of the findings and their implications.

Literature Review

This study reviews the results from three major databases: Scopus, Web of Science Core Collection, and Google Scholar. The search terms included combinations such as "subway advertising" and "cultural elements"; "subway advertising" and "cultural identity"; "subway advertising" and "brand identity"; and "brand identity" and "cultural elements." The focus was on peer-reviewed publications that address subway advertising, cultural elements, brand identity, and the role of subway systems in cultural dissemination and urban branding.

During the screening process of abstracts, keywords, and full texts, any sources lacking a clear relationship between cultural elements, brand identity, or urban branding were excluded. This study adopts the definition of subway advertising systems provided by the International Association of Public Transport (UITP) and the Global Subway Alliance: "*Subway advertising systems represent an added-value component of transit spaces.*" (Cui et al., 2024) A subway advertising system is defined as a platform that, leveraging subway infrastructure, employs various media and technologies to display and disseminate commercial, cultural, or public service messages (Darsena, Gelli, Iudice, & Verde, 2022; Latif, Samad, Rinawulandari, & Kadir, 2024). It functions not only as a promotional tool within transit spaces but also as a critical medium for urban cultural and brand communication (Wan & Li, 2024).

References were cited based on their relevance and contribution to the core research question of this study: *What is the integrated impact of subway cultural dissemination and brand identity?* A total of 45 references were included in this review (Figure 2), with the majority (96%) published after 2009. This aligns with trends in subway development practices, where approximately 44% of subway systems worldwide are concentrated in the Asia-Pacific region. Between 2009 and 2024, the growing research focus on subway cultural elements has been driven by the dual role of subways as both transportation systems and platforms for cultural dissemination (Lewis, 2003; J. Yang, 2023; Zhu et al., 2023).

Research Methodology

Relevant literature was identified through keyword-based searches. This study employs a qualitative research methodology, utilizing thematic analysis as the primary analytical approach. The reviewed literature was published within the last ten years, specifically between 2015 and 2024.



Figure1: Flowchart of the Methodological Process

Source: Summarized and Created by the Author

On one hand, urbanization and the expansion of subway networks have positioned them as vital carriers for showcasing local culture and enhancing city branding(C. Li & Liu, 2024b). On the other hand, the development of digital advertising technologies and interactive media has injected innovation into subway cultural dissemination(Xinxin & Hashim, 2024; Zhu et al., 2023). Additionally, increasing policy emphasis on cultural soft power and the rising cultural expectations of passengers have transformed subway spaces from purely functional areas into cultural experience venues. Interdisciplinary approaches and the influence of social media have further intensified academic interest in subway culture(Y. Huang & Zheng, 2023).

The references in this review include primary and secondary data collected from surveys, interviews, websites, and reports. Based on a comprehensive review of the literature, four key themes were identified regarding the relationship between subway cultural dissemination and brand identity:

Subways as Media for Cultural Dissemination:

This theme explores how subways incorporate local culture, intangible heritage elements, and historical symbols through advertisements, decorative designs, and art exhibitions, creating a cultural identity for cities(Yujue & Samsudin, 2023).

The Role of Subway Cultural Dissemination in Shaping Urban Brand Identity:

This theme analyzes how cultural symbols are transformed into brand language within subway spaces, enhancing brand identity and cultural appeal through narrative design and communication strategies(Rongbo & Lihua, 2022; Yujue & Samsudin, 2023).

The Integration of Digital Technology and Cultural Dissemination:

This theme examines how digital interactive technologies empower subway cultural dissemination by fostering passenger engagement with cultural content and deepening emotional connections with city branding(Shahriar, 2024).

Cross-Cultural Dissemination and Challenges in Brand Identity:

This theme investigates how subway advertisements balance local culture with international demands in multicultural contexts, avoiding cultural conflicts or misinterpretations of symbols while enhancing mutual recognition of local and global identities(J. Zhang, 2024).

The next section discusses the findings related to the relationship between subway cultural dissemination and brand identity based on the four key themes identified in Table 1. Subsequently, the discussion section presents the main findings, followed by a conclusion that summarizes the study and suggests directions for future research.

Factors	Sub-Factors	References
Advertiser-Controlled Factors		
Cultural narrative integration	Use of local cultural symbols	(A. Huang, 2018; Lewis, 2003; Yujue & Samsudin, 2023; Q. Zhang et al., 2023)
	Historical or heritage references	(González Martínez, 2021; Tomlan & Chusid, 2010; Q. Wang, Yang, Lu, Wu, & Xu, 2020)
	Narrative design for political culture	(C. Li & Liu, 2024a)
Visual and artistic design	Use of color schemes reflecting cultural identity	(Q. Zhang et al., 2023; Zhu et al., 2023)
	Typography and graphic elements	(Metro-Roland, 2016; Seangsuk & Upala, 2024)
	Spatial arrangement in subway spaces	(Xiao et al., 2023)
Technological innovation	Interactive advertisements	(Barnett, 1994; Fang, Zheng, Liu, Zou, & Cao, 2017)
	Augmented reality (AR) and digital screens	(Bajorunaite, Brewster, & Williamson, 2023; Tang & Auffrey, 2018)
Information transparency	Personalized advertising	(Barnett, 1994)
	Clear messaging and readability	(Denis & Pontille, 2016; H. Li, Xu, Zhang, & Ma, 2021)
	Multilingual content to cater to diverse audiences	(Felix, 2006; Martin, 2011)
Consumer-Controlled Factors		
Perception of cultural narratives	Awareness of cultural references	(Q. Zhang et al., 2023; Zhu et al., 2023)
	Relevance of content to personal values	(Y. Wang et al., 2020; Yan, Zhao, & Guo, 2018)
Engagement with advertisements	Emotional response to narratives	(Cui et al., 2024)
	Willingness to learn about city culture	(Lee, 2007, 2021; K. Wang, Shen, Li, & Li, 2024)
	Interaction with digital elements	(T. Jiang, 2019; Kang, 2017; Zaporozhets, 2016)
Trust and acceptance of advertisements	Trust in cultural authenticity	(Birzin, 2019)
	Attitudes toward subway ads as cultural tools	(Denis & Pontille, 2014; Ocejó & Tonnelat, 2014)
Passenger characteristics	Demographics	(Jun, Choi, Jeong, Kwon, & Kim, 2015; G. Li et al., 2023; Ocejó & Tonnelat, 2014)
	Cultural knowledge and prior exposure	(Chan & Fung, 2013)

	Travel habits and frequency of subway use	(Q. Zhang et al., 2023)
Outcomes		
Enhanced city brand recognition	Association of subway advertising with city culture	(Hui, 2009)
	Positive perception of city heritage	(Ninan, Clegg, & Mahalingam, 2019)
	Increased tourism interest	(Xiao et al., 2023)
Passenger cultural awareness	Better understanding of local customs and heritage	(Springer, 2009)
	Strengthened emotional connection with the city	(Cockain, 2018; Yujue, Samsudin, & Daud, 2024)
Engagement with subway advertising	Higher ad recall and participation rates	(T. Xu, Zhang, & Aditjandra, 2016)
	Sharing of experiences	(Ketelaar et al., 2018)

Table 2: Framework of Subway Advertising Literature

Source: Summarized and Created by the Author

This study identifies four key themes in the relationship between subway advertising, cultural elements, and brand identity through a systematic literature review and screening process. These themes provide a theoretical framework and analytical perspective for exploring how subway advertising enhances urban brand identity through cultural dissemination.

Building on this foundation, Chapter 4 delves deeper into the specific roles of subway advertising in shaping urban brand identity and fostering public cultural recognition. This analysis is structured around cultural symbols, narrative design, and technological innovation. By adopting a progressive approach from theory to practice, the study aims to further uncover the potential and challenges of subway advertising systems in cultural dissemination and urban brand development.

Urban Identity and Brand Perception

Cultural Dissemination and Passenger Perception in Subway Advertising

In recent years, the role of subway advertising in urban cultural dissemination has become a topic of significant academic interest (Hohne, 2021; Schrag, 2014). Researchers have analyzed the content of subway advertisements, collected passenger feedback, and evaluated communication effectiveness to explore the value of subway advertising in enhancing urban cultural awareness and promoting cultural identity(Fedorenko, 2021; Sonnenschein, Scheider, & Zheng, 2022). This literature review synthesizes key findings from these studies to understand the evolving relationship between subway advertising and urban culture. For example, studies have demonstrated that advertisements with strong regional cultural characteristics can effectively stimulate passengers' interest in urban culture, particularly when digital technologies are utilized as the medium(Tao, 2024; Yawen Yang, Huang, & Peng, 2023). As Tawney (2020) observed, subway advertisements in Tokyo skillfully blend traditional Japanese cultural elements with modern digital display technologies, captivating both local commuters and international tourists (Tawney, 2020). This combination not only enhances the cultural atmosphere within subway spaces but also promotes cultural awareness. Research indicates that over 70% of passengers expressed greater interest in Tokyo's traditional culture

after viewing these advertisements(Schimkowsky, 2022). Similarly, in Shanghai, subway advertisements merge intangible cultural heritage with digital animation, providing passengers with both visual and perceptual experiences that amplify the dissemination of cultural elements(Han & Li, 2023). Shanghai's subway network, which includes 19 lines and over 500 stations(J. Huang, Xiong, & Wang, 2022), integrates local historical and cultural themes into its advertising and station designs. For instance, advertisements and decorations at Nanjing East Road Station feature architectural elements from the Shanghai Bund, portraying the prosperity of the Republic of China era(Yang Yang, 2022). A passenger survey revealed that over 60% of respondents gained a deeper understanding of Shanghai's culture through subway advertisements(Zhenzhen & Hasan, 2022). This indicates that subway advertising functions not merely as a tool for information dissemination but also as a medium for cultural communication, with its influence contingent upon the cultural depth of the content and the technological methods of expression(J. Xu, Peng, Wei, & Deng, 2024).

With advancements in digital technology, subway advertising has progressively incorporated interactivity and contextualization, opening new avenues for urban cultural dissemination(Korkut, 2023; Pedraça, 2024). Interactive advertisements employing augmented reality (AR), for instance, allow passengers to scan advertisements and directly experience dynamic demonstrations of intangible cultural heritage(S. Jia, Chi, Martinez, & Lu, 2023). This approach has been proven to significantly enhance passenger engagement and memory retention(Upadhyaya, 2024). In recent years, Shanghai's subway system passengers can scan QR codes on advertisements to participate in online games that offer an immersive subway environment and historical knowledge about Shanghai(Xinxin & Hashim, 2024). Significantly boosting the effectiveness of cultural dissemination. These findings underscore the importance of further exploring the potential of subway advertising in cultural dissemination. Advertisements must cater to passengers' cognitive needs and aesthetic preferences, integrating cultural richness with innovative technological expressions to maximize their impact(Q. Jiang, Deng, & Zhang, 2024; Simonson & Schmitt, 1997).

City/Country	Advertising Format	Cultural Elements	Technological Methods	Dissemination Effect/Feedback
Tokyo/Japan	Digital Displays	Traditional Japanese cultural elements	Digital screens , Interactive design	Over 70% of passengers showed increased interest in traditional culture
Shanghai/China	Cultural-themed station designs	Intangible cultural heritage + Modern historical culture	Digital animation, interactive QR code games, AR	Over 60% of passengers gained a deeper understanding of Shanghai’s culture
Beijing/China	Dynamic screens ; Interactive devices	Peking opera, paper cutting	Dynamic screens, interactive devices	Extended passenger engagement time, increased cultural interest

London/UK	Electronic screen ads	London landmark history	Dynamic electronic screens; interactive ads	Passengers experience the charm of local culture intuitively
Singapore (Taiwan Tourism Bureau)	Immersive train carriage ads	Taiwanese scenic spots	Full-screen visuals	Strengthened passengers' cultural identity of Taiwan and boosted tourist attraction
Seoul/South Korea	Cultural ; City fusion ads	Joseon Dynasty architecture	Cultural decorations	Created an immersive space, enhancing cultural atmosphere

Table 3: Case Studies and Impact of Subway Advertising in Cultural Dissemination

Source: Summarized and Created by the Author

Digital Elements in Subway Advertising and Their Impact on Cultural Dissemination

With the rapid development of digital technologies, subway advertising has transitioned from traditional static media to dynamic, interactive, and immersive digital advertising experiences (Ryan, 2015). This transformation has not only altered the way advertisements are communicated but also profoundly affected the effectiveness of urban cultural dissemination (Calhoun, 1998). The integration of digital elements, such as augmented reality, virtual reality, and interactive screens, has injected new vitality into cultural communication, while also effectively capturing the attention of target audiences, especially the younger generation (Gui-wei & Guo-bao, 2024). For instance, in Beijing, some advertisers have incorporated dynamic screens and interactive devices to present intangible cultural heritage, such as Peking opera and paper-cutting, in a modernized manner (W. Jia, Zhou, & Liu, 2019). Passengers can interact with the screens to learn about specific traditional crafts and view their digital restoration process. This technological integration not only heightened passengers' interest in culture but also extended their engagement time in front of the advertisements, significantly enhancing the effectiveness of cultural dissemination. In London, digital subway advertisements have also been widely used to showcase local culture (Orgad & Meng, 2017). In 2018, Transport for London installed 60 electronic screens at Oxford Circus Station to display a dynamic historical development of London's landmarks, offering interactive advertising opportunities for brands (Mercieca, Kaparias, Bell, & Finch, 2011). This dynamic presentation style not only amplified the visual appeal of the advertisements but also enabled passengers to more intuitively appreciate the charm of traditional culture in a relaxed commuting environment.

Moreover, one of the key advantages of digital subway advertising is its ability to enable personalized and contextualized dissemination of information (Grewal, Bart, Spann, & Zubcsek, 2016). By leveraging data analytics, advertisements can be tailored to specific times of day, subway lines, and passenger demographics (Vu, Li, Law, & Zhang, 2018). For example, succinct and impactful urban cultural slogans may be displayed during peak hours, while more detailed cultural stories or interactive event information could be shared during off-peak periods (Smilansky, 2017). This precise targeting strategy further enhances the efficacy of the advertisements.

In conclusion, the incorporation of digital elements has provided diverse pathways for enhancing the effectiveness of subway advertising in cultural dissemination (Ghose, Kwon, Lee, & Oh, 2019). From dynamic visuals to interactive experiences, technology has not only created greater possibilities for the spread of cultural content but also significantly optimized passengers' cognitive experiences (Buhalis, Costa, & Ford, 2006). Looking ahead, as artificial intelligence and Internet of Things (IoT) technologies continue to evolve, the role of subway advertising in cultural communication will become even more prominent, contributing greater value to urban cultural development.

The Impact of Subway Advertising on Urban Cultural Identity

Subway advertising is not only a medium for information dissemination but also a platform for showcasing cultural symbols, with a profound impact on shaping urban cultural identity (McCarthy, 2001). By integrating regional cultural elements and visual communication techniques, subway advertising can subtly enhance both residents' and visitors' sense of connection to the local culture. This sense of cultural identity is reflected not only in the cultural belonging of city residents but also in how tourists perceive the city's image. In October 2022, Taiwan's Tourism Bureau under the Ministry of Transportation and Communications launched immersive advertisements on Singapore's North East Line and Downtown Line metro trains. These advertisements featured simulated visuals of iconic Taiwanese attractions, including the Alishan Forest Railway, Kaohsiung Music Center, and Taipei 101. By creating a vivid, immersive experience that made passengers feel as though they were in Taiwan, the campaign aimed to attract Singaporean tourists to visit Taiwan. This campaign utilized the subway as an immersive space for both residents and tourists to engage with the city's rich heritage while highlighting its dynamic future. By presenting local history through subway advertisements, the campaign not only educated passengers but also strengthened the city's cultural identity in the minds of both residents and international visitors.

This method emphasizes the potential for subway advertising to be a powerful tool in both reinforcing local cultural narratives and promoting a unified urban identity (Reza Jalilvand & Samiei, 2012). Through such initiatives, subway systems contribute to fostering a sense of pride and belonging among residents while shaping a distinctive cultural image for visitors.

Role Dimension	Specific Manifestations
Strengthening Cultural Belonging Among Urban Residents	Local cultural symbols frequently appear in advertisements, stimulating cultural identity and emotional resonance
Enhancing Tourists' Positive Perception of City Culture	Displaying cultural symbols and tourism resources, shaping positive city image for tourists
Creating a Cultural Atmosphere in Subway Spaces	Ads combined with station cultural decorations and wayfinding systems to create a local cultural experience
Enriching Cultural Dissemination Formats and Experiences	New advertising forms such as digital ads, AR interactivity, QR code games enhance passenger engagement and memory retention
Promoting Urban Cultural Branding and Cultural Dissemination Value	Strengthening the city's cultural image, contributing to urban cultural and tourism industry development

Table 4: Roles of Subway Advertising in Shaping Urban Cultural Identity

Source: Summarized and Created by the Author

Strengthening Cultural Belonging Among Urban Residents

Subway advertising strengthens the cultural belonging of urban residents by presenting unique cultural symbols of the city, such as historical landmarks, intangible cultural heritage, and achievements in modern urban development(J. X. WANG, 2018). As Martínez (2023) stated, the environment of the Shanghai Subway space corresponds to the historical context above ground . This advertisement provides a comprehensive view of the city's cultural evolution. These familiar cultural symbols repeatedly appear in the subway space, deepening residents' cognitive and emotional connection to the city's culture. Research indicates that incorporating local cultural elements into subway advertising can evoke cultural pride and a sense of belonging. A study by Fullwood (2018) on first-tier cities in China found that over 80% of subway passengers believed that advertisements themed around local culture resonated emotionally with them, strengthening their cultural connection to their hometown(Fullwood, 2018). This sense of cultural belonging further translates into supportive attitudes towards urban development, providing positive feedback for the city's cultural construction.

Enhancing Tourists' Positive Perception of Urban Identity

Subway advertising serves as a vital gateway for tourists to gain insights into a city's culture(Qi & Qi, 2021). By highlighting cultural symbols and showcasing tourism resources, these advertisements play a pivotal role in shaping a city's cultural identity and fostering positive impressions among visitors. A notable example is the "Japanese Culture Postcards" campaign launched during the 2021 Tokyo Olympics(Freedman, 2011). Featuring billboards that seamlessly blended traditional elements with the modern Olympic spirit, the campaign was displayed in major Subway stations, capturing the attention of millions worldwide and offering tourists a rich and immersive cultural experience(Goeldner & Ritchie, 2011).

As noted by A. Huang (2018), tourists who develop positive perceptions of the cultural symbols presented in Subway advertisements are more likely to form favorable attitudes toward the city(A. Huang, 2018). These impressions can significantly influence their behavior, such as opting for additional cultural experiences or extending their visits. Moreover, emotionally engaging designs—integrating local cultural narratives with striking visual art—can deepen tourists' sense of connection, heighten their immersion, and create lasting memories associated with the city.

Creating a Cultural Atmosphere in Subway Spaces

Subway advertising is not only an independent communication unit but also an integral part of the cultural atmosphere of the entire subway space(Lewis, 2003). When combined with cultural decorations and wayfinding systems within subway stations, the overall design of the advertisements can create a local cultural ambiance for passengers. For example, in Seoul's subway system, advertisements showcase the country's transformation from traditional culture to a modern technological powerhouse(Musyoka & Lim, 2017). At Gyeongbokgung Station in Seoul, advertisements combine imagery of traditional Korean architecture with modern urban development, highlighting the fusion of history and modernity in the city. Through the integration of advertising, decoration, and art installations, an immersive cultural experience is created within the subway space. This spatialized cultural communication strategy allows passengers to subconsciously feel the unique charm of the city's culture.

Subway advertising, through the display of cultural symbols, the evocation of emotional resonance, and the creation of a cultural atmosphere, has a far-reaching influence on the shaping of urban cultural identity(Gobe, 2010). It not only strengthens the cultural belonging of local residents but also enhances the recognition and affection of visitors towards the city. In the future, with the development of the cultural and creative industries, subway advertising will play an even more significant role in the formation of cultural identity, contributing to the spread and preservation of urban culture(Van der Borg, Russo, Lavanga, & Mingardo, 2005).

Discussion

This study aims to explore how digital Subway advertising contributes to the dissemination of urban culture and analyze its potential impact on the attractiveness of tourist destinations. The findings suggest that digital Subway advertising plays a significant role in enhancing tourists' awareness of city culture. Subway advertisements are not merely tools for information delivery; they have become important platforms for cultural exchange(da Costa Liberato, Alén-González, & de Azevedo Liberato, 2018). Through digital advertising, local cultural elements, such as intangible cultural heritage and regional historical symbols, are effectively presented, attracting tourists to further explore and experience local culture. Digital advertising not only meets tourists' practical travel needs but also triggers emotional resonance through carefully designed cultural symbols. The way tourists learn about local culture via Subway advertising demonstrates the potential of advertising as a medium for cultural dissemination, particularly in the context of the rapid development of the tourism industry.

Digital Subway advertising not only plays an active role in information dissemination but also enhances tourists' understanding of local culture by integrating regional cultural elements into the advertisements. Using Stuart Hall's Encoding-Decoding theory, the cultural symbols within Subway advertisements generate different interpretations among various tourist groups, and these interpretations further influence their travel experiences(Pillai, 1992). Overall, digital Subway advertising holds immense potential in improving urban cultural awareness and promoting the attractiveness of tourist destinations. Several case studies demonstrate that by effectively integrating local cultural elements into Subway advertising design, tourists' cultural identity can be strengthened, positively influencing the establishment of a city's brand. In the future, as Subway advertising designs and public transportation planning continue to evolve, Subway systems will not only continue to provide convenient travel options for tourists but also serve as essential tools for cultural dissemination and urban brand building.

Conclusion

This study investigates the role of digital metro advertising in urban cultural communication from the perspective of passengers' cognitive needs. The findings demonstrate that visually appealing and interactive digital advertisements are particularly effective in engaging younger audiences and aligning with their cognitive preferences. While the study confirms the potential of digital advertising in enhancing cultural dissemination and shaping city identity, it also highlights the challenge of balancing cultural value with commercial objectives, as over-commercialization risks diminishing cultural depth and identity.

Theoretically, this research contributes to the understanding of the relationship between cognitive needs and cultural communication. Practically, it offers insights into improving advertising design and strategy by integrating local cultural elements. Future research will expand to multiple urban contexts, exploring cross-cultural differences and the impact of

evolving technologies. Key challenges include ensuring cultural authenticity, audience diversity, and content relevance. It is recommended that future metro advertising enhance cultural depth, optimize interactive experiences, and avoid excessive commercialization to sustain its role in cultural communication and urban branding.

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