

Original Research Article

Identifying the Factors Affecting Social Media Management in Hyperconnected Museums Based on a Meta-Synthesis Approach*

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Received: 09/12/2024

Accepted: 15/04/2025

Available online: 21/04/2025

Abstract | The terrible Corona pandemic underlined the importance of using cyberspace in organizations, especially display-oriented cultural institutions such as museums. This has become more vital than ever with the advancement of new technologies, the increase in bandwidth, and the birth of hyperconnectivity, combined with the expansion of social media. In order not to lag behind the efficient management of the aforementioned media, identifying and developing effective concepts and components will be a fundamental element in understanding, redefining, and even designing a management model for the aforementioned media. For this purpose, in this study, scientific research resources on social media management in hyperconnected museums have been reviewed and interpreted, and relevant themes have been extracted to identify its effective components. To collect resources, a library method was used and the the resources were scrutinized and selected via the Silva method from 137 primary sources published between 2013 and 2023, 24 noteworthy studies were selected. To interpret and develop concepts, a systematic review research method was used, followed by a meta-synthesis method and thematic analysis. The development of the extracted concepts and their analysis showed that the most effective components of social media management in hyperconnected museums are the use of new technologies and the development of a strategy for the aforementioned media based on and in line with the organization's strategies. Also, content management is the most important form of management for social media, and of course, audience research will play a fundamental role in the comprehensive management of social media in hyperconnected museums.

Keywords | *Hyperconnectivity, Social media, Meta synthesis, Thematic analysis.*

Introduction

The rapid development of the digital world is occurring at an unimaginable and dizzying pace. No sooner is a digital product created than a newer, more complete version with additional features is

*This article is taken from the doctoral thesis of "Mohammad Ali Tajik" entitled "Designing the model of social media management in hyperconnected museums", which was conducted under the guidance of Dr. "Fatemeh Azizabadi Farahani" and Dr. "Omidali Masoudi" and the consultation of Dr. "Ali Akbar Farhangi" at the Faculty of Management and Economics, Islamic Azad University, Research Sciences Branch.

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introduced. Falling behind in this fast-paced race can have numerous adverse effects. The most novel form of communication, known as hyperconnectivity, has emerged as a result of these very transformations. On the other hand, the COVID-19 pandemic significantly increased the necessity of utilizing technological advancements such as virtual tools and especially social media within public and cultural institutions like museums. This research focuses specifically on hyperconnected museums. Although these media are increasingly evolving toward more

user-friendly and popular functionalities, each is known for addressing a particular need, and, based on their methods of attracting and persuading users and followers, they each operate with unique processes. Therefore, to design processes and develop a framework for managing these media, there is a need to expand relevant concepts something that must be achieved through dedicated research. By identifying the factors influencing social media management in hyperconnected museums and examining and understanding how they function, we can attain higher levels of effective use of these media.

Theoretical Foundations

Andre Kaplan and Michael Haenlein define social media as: A group of internet-based applications that build on the ideological and technological foundations of the Web, and that allow the creation and exchange of user-generated content (Kaplan & Haenlein, 2010). Conversely as the definition of a museum: A museum is a non-profit, permanent institution in the service of society that researches, collects, conserves, interprets, and exhibits tangible and intangible heritage. Museums that are open to the public, accessible, and inclusive. They promote diversity and sustainability. They operate ethically, professionally, and with the participation of communities, offering diverse experiences for education, enjoyment, reflection, and sharing of knowledge. This is the most recent definition approved by the International Council of Museums (Icom, 2022) in the world. As for hyperconnectivity a relatively new term- it was coined by two Canadian sociologists. Anabel Quan-Haase and Barry Wellman. Hyperconnectivity refers to all forms of communication: human-to-human, human-to-machine, and machine-to-machine. With the rise of new smart technologies and the expansion of broadband, such connections are becoming increasingly tangible and impactful (Wellman, 2001, 250). Organizations are becoming more engaged with it every day-and museums are no exception. Finally, the era of social media is an era of data and algorithms. Media management in this complex, ever-changing, and fast-paced environment must be agile, swift, flexible, and also creative and innovative. In other words, media management means managing content everywhere, all the time, across all platforms. All efforts and high costs invested in a media organization will be wasted if its content lacks the necessary power to penetrate

the audience and create a meaningful interactive space (Jahanshahi, 2020).

Research Background

As previously mentioned, the novelty of the topic of hyperconnectivity-not only in Iran but globally-has made it very difficult to access academic and research sources that directly address this subject. Adding the subject of museums to hyperconnectivity, and further incorporating the monitoring of social media management within this domain, has made the task even more challenging. Therefore, by focusing on the concepts of “social media management”(Table 1), “social media management in museums”(Table 2), and “museums and hyperconnectivity”(Table 3), an initial bank of 137 research articles was compiled. Then, by refining the keywords, concepts, and topics, and certainly the credibility of the sources, 86 sources were classified and in the next subsequent stage, following a comprehensive review of the full abstract and findings of the sources, 24 sources were retained as part of the research background.

Research Methodology

This research is applied in terms of its objective; exploratory-analytical in nature; and qualitative in its approach. Based on the existing literature, a systematic review method was conducted. Therefore, in terms of the execution strategy, the research used a meta-synthesis method, utilizing thematic analysis. For this purpose, 137 studies were identified, and the Silva method (Fig. 1) was used to screen the sources. Since meta-synthesis is a qualitative method based on a systematic review of library-based studies, aimed at gaining a deep understanding of the phenomenon under study, and it emphasizes in-depth interpretation and analysis of qualitative studies(Naghizadeh et al., 2015), it has been used here for conceptual development (Zimmer, 2006). Moreover, due to the broad and novel scope of the related studies, thematic analysis has been applied for interpretation and analysis.

There are various methods for thematic analysis, each following its processes. In this study, a comprehensive step-by-step process for thematic analysis has been proposed by combining the methods of King & Harraocks (King & Harraocks, 2010), Braun & Clarke (Braun & Clarke, 2006), and Attride-Stirling (Attride Stirling, 2001).

The full process of thematic analysis can be divided into three main stages:

1. Decomposition and Description of the Text

Table 1. social media management. Source: Authors.

Article code	Research title	Researcher/Researchers	year of pub.	Document Type
smm1	Social Media in Companies. Integrated Approach to a Social Media Strategy	Friedrichsen	2013	Article
smm3	Social media maturity model	Thomas & Woodside	2016	Article
smm5	Brand Management with Social Media	Humbatov	2015	Book
smm6	Social media management	van looy	2015	Book
smm7	The Effect of Social Media on Trust and Brand Loyalty Formation in the Brand Community (Case Study: The (Social Network of Instagram	Shirkhodai et al.	2017	Article
smm10	Management of social networks	Hosayni	2015	Article

Table 2. social media management in museums. Source: Authors.

Article code	Research title	Researcher/Researchers	year of pub.	Document Type
s3m1	MUSEUMS AND SOCIAL MEDIA: MODERN METHODS OF REACHING A WIDER AUDIENCE	Marakos	2014	Article
s3m2	Strategic Social Media Management for NGOs	Danyi & Chaudhri	2018	Book
s3m3	Social media and archaeological museums: a Portuguese perspective	Adriaan	2015	Article
s3m5	SOCIAL MEDIA AND MUSEUMS: REFRAMING AUDIENCE ENGAGEMENT IN THE DIGITAL COMMUNICATION AGE	Iwasaki	2017	Dissertation
s3m6	Digital Museum Collections and Social Media: Ethical Considerations of Ownership and Use	Fouseki & Vacharopoulou	2013	Article
s3m8	Technological innovations in museums as a source of competitive advantage	Luiza & Borza	2016	Article
s3m9	The Connected Museum: Role of the Changing Museums in Changing World	Rupali	2018	Article

Table.3. Museums & Hyperconnectivity. Source: Authors.

Article code	Research title	Researcher/ Researchers	year of pub.	Document Type
hcm1	Views and Examples of Hyper-Connectivity	Gabriel Ganascia	2019	Article
hcm3	Hyperconnectivity	Adrian	2016	Book
hcm4	A Hyperconnected Manufacturing Collaboration System Using the Semantic Web and Hadoop Ecosystem System	Kang et al.	2016	Article
hcm5	From facilitating interactivity to managing hyperconnectivity: 50 years of human-computer studies	Gaines	2019	Article
hcm6	VIRTUAL MUSEUMS AS DIGITAL STORYTELLERS FOR DISSEMINATION OF BUILT ENVIRONMENT: POSSIBLE NARRATIVES AND OUTLOOKS FOR APPEALING AND RICH ENCOUNTERS WITH THE PAST.	Caspani et al.	2017	Article
hcm7	Using Mobile Technology for Enhancing Museum Experience: Case Studies of Museum Mobile Applications in S. Korea	Rhee & Choi	2015	Article
hcm8	A Gift of Internet of Things (IoT) to Museum	Bhattacharya	2019	Article
hcm9	MUSEUM PRESENTATION	Dolák & Šobánová	2019	Book
hcm10	NEW INFORMATION AND COMMUNICATION TECHNOLOGIES FOR MUSEUM DEVELOPMENT	Icom Russia	2014	Case Study
hcm11	Interactive Technologies in Museums: How Digital Installations and Media Are Enhancing the Visitors' Experience	Roberto et al.	2018	Article
hcm12	Interactive Presentation of the Exhibits in the Museums Using Mobile Digital Technologies	Chivarov et al.	2013	Article

- 2. Explanation and Interpretation of the Text
 - 3. Integrarion and Recombination of the Text
- All of these stages are accompanied by interpretation and analysis.

Research Findings

After labeling and naming the data, to discover new insights and gain a better understanding, a more detailed and meticulous analysis was conducted. In microanalysis, comparative analysis techniques were used. The aim was to uncover a range of possible

meanings and themes within the words and content of the findings from the reviewed sources. Using this method, the categorization of concepts began, and each category was grouped under a more abstract term called a theme. For example, by comparing different concepts, the researcher realized the concepts:
 “A promotional strategy is developed to help achieve the organization’s strategy.”
 “There is interdependence between the promotional strategy and the museum strategy”

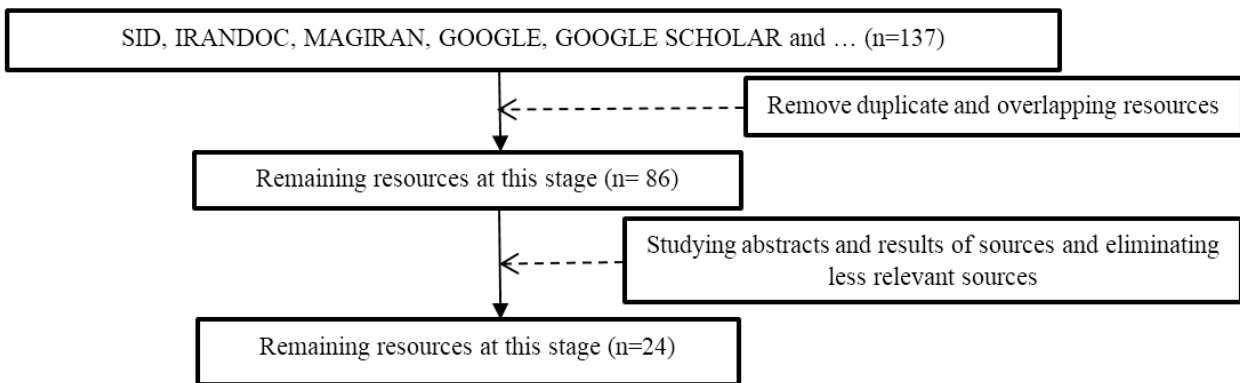


Fig. 1. Flowchart of Research Source Selection Using the Silva Method. Source: Authors.

Table 4. Overview of the results of the content analysis steps. Source:Authors.

Stage	Step	Action
Text analysis and description	Getting to know the text	Identified 137 primary sources Re-read and extracted 86 sources Study abstracts and results of sources and extracted 24 sources
	Creating initial codes and coding	Coding sentences related to research variables 84 codes Coding interesting features of data 8 codes
	Searching and understanding themes	Matching codes to theme templates Extracting themes from coded sections of text Refining and reviewing themes
Explanation and interpretation of the text	Drawing a network of themes	Checking and controlling the consistency of themes with extracted codes Sorting themes Selecting basic, organizing, and overarching themes Drawing theme map(s) Modifying and verifying theme network(s) 26 items
	Themes network analysis	Defining and naming themes in 6 categories
Text blending and merging	Report preparation	Summarizing the network of themes and expressing them concisely and clearly Extracting interesting data samples Relating the results of the analysis to research questions and theoretical foundations Writing a scientific and professional report on the analyses

“The promotional strategy must align with the organization’s strategy”

-all point to one idea: that the museum’s promotional strategy should support the museum’s overall strategic goals. Based on this content from 3 above concepts, a theme was derived:

“The necessity of developing social media strategies in alignment with organizational strategies.”

This theme is at a higher level of abstraction and encompasses the mentioned concepts. Other themes were extracted similarly.

Next, a preliminary categorization of the data was carried out, and the concepts obtained from coding were grouped into 26 sub-themes under the general heading of “themes.” Corresponding categories were then developed for these themes.

The steps of the thematic analysis used in this research are presented in Table 4: Review of Thematic Analysis Steps.

By final comparison of themes, categories, codes, and of course extracted sentences, the final table of categories and themes was obtained as follows (Table 5).

Discussion

What emerges from the categories and themes above is that the first category is directly related to hyperconnectivity. In other words, in all its forms and manifestations, communication requires modern technologies. Among these, perhaps the most important tool to facilitate transmedia communication is the use of appropriate platforms. This subject has not yet become transmedia. A review of codes shows that developing strategies in line with organizational strategies is essential. The developed strategies for social media are not aligned with organizational strategies. The emphasis placed on the categories ensuring alignment between social media strategies and organizational strategies is well justified. Unfortunately, one of the main issues in some Iranian organizations is the independence of different units in strategy development. In other words, the strategies of organizational units-particularly the staff units-are primarily shaped by the preference of the respective unit managers and even the organization’s senior leadership while ideally, strategies of each unit and even each small section of

Table. 5. Table of categories and themes. Source: Authors.

No	Categories	Themes
1	The importance of using modern technologies in museums	Realization of the Museum Without Walls Gamification New Technologies as a Pillar of Interconnectivity Formation of a New Paradigm of Social Communication Multilevelization of Learning Patterns in Museums New Spatial Formation in Museum Advertising New Spatial Formation for Modern and Even Traditional Museum Markets
2	The need to develop a social media strategy (in line with the organization’s strategies)	Social media strategy in line with the organization’s strategies Adapting the organizational structure and social media management structure Meeting the changing needs of the organization Adapting social media to meet external needs Choosing the right platforms for each museum and in line with museum policies
3	Social Media Marketing Assistant	Social Media Mix and Marketing Mix The Importance of Business Intelligence in Social Media Management Social Media and Advertising The Role of Social Media in Organizational Interactions
4	Audience knowledge is one of the pillars of any media.	Audience segmentation in all dimensions such as age, gender, education, religion, culture, etc. Attracting audiences with the help of social media Monitoring, analyzing, and evaluating audience behavior Breaking down the physical boundaries between the audience and the museum The audience on social media is no longer limited to museum working hours
5	Social media management Content management	Content that meets the needs of the audience Storytelling Enabling user-generated content in the era of transience
6	Related concepts	The importance of culture, the geographical scope of competition in developing a strategic plan, the importance of human resource training related to social media

the organization should facilitate the organization in reaching overall strategies. The role of social media in marketing is so outstanding that in discussion under electronic marketing today, they carry the main burden of marketing, and organization-especially those producing content and aiming for marketing-prioritize them. The next category draws attention to audience analysis. It can be said that if the target audience is not clearly defined for an organization, it will not achieve its strategic goals. The following category emphasizes the importance of content management. As previously mentioned, the interactive nature of social media and the ease with which users can create public content are two of its key characteristics, therefore, it's clear that managing these media aligns closely with content management. This point has been directly and indirectly emphasized by experts in most reviewed sources. However, careful attention must be paid to what content is being delivered, to whom, to meet which organizational need, and through which media. If an organization errors in selecting its target audience or the medium for delivering the message, it not only fails to achieve its goal but may also risk eliminating

that audience from its engagement circle entirely. Today, with the growing seriousness of storytelling and its incredible appeal in attracting audiences, content production may seem simple, however, neglecting the importance of content production can have irreparable consequences for the organization.

Conclusion

After discussing and analyzing the content of the research, it has become clear that the following categories-“The importance of using modern technologies in museums “, “The necessity of developing social media strategies(aligned with the organization’s strategies)”,“Social media as a supporter of marketing,” “Audience analysis as a pillar of any media”, “management of social media and content “-are key components in the management of social media in transmedia-oriented museums. These components play an influential role in shaping the processes of social media management and in outlining a model for this purpose. The identification of these components can serve as a foundation for designing a social media management framework in transmedia-oriented museums.

References list

- Adrian, D. M. (2015). Social media and archaeological museums: a Portuguese perspective. *International Journal of Cultural and Digital Tourism*, 2(1), 55-65.
- Attride-Stirling, J.(2001). Thematic Networks: An Analytic Tool for Qualitative. *Qualitative Research*, 1(3), 385-405. <https://doi.org/10.1177/146879410100100307>
- Bair, C. (1999). *Meta-synthesis. In annual meeting of the Association for the Study of Higher Education*. San Antonio, TX.
- Bhattacharya, I. (2019). *A Gift of Internet of Things (IoT) to Museum. ECHOS OF INDIA*. india. <https://doi.org/10.13140/RG.2.2.19697.43368>
- Braun, V., & Clarke, V. (2006). Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Caspani, S., Brumana, R., Oreni, D., & Previtali, M. (2017). VIRTUAL MUSEUMS AS DIGITAL STORYTELLERS FOR DISSEMINATION OF BUILT ENVIRONMENT: POSSIBLE NARRATIVES AND OUTLOOKS FOR APPEALING AND RICH ENCOUNTERS WITH THE PAST, *The International Archives of the Photogrammetry Remote Sensing and Spatial Information Sciences*, XLII-2/W5, 113. DOI:10.5194/isprs-archives-XLII-2-W5-113-2017
- Chivarov, N., Ivanova, V., Radev, D., & Buzov, I. (2013). Interactive Presentation of the Exhibits in the Museums Using Mobile Digital Technologies. *IFAC Proceedings Volumes*, 46(8), 122-126. <https://doi.org/10.3182/20130606-3-XK-4037.00014>
- Cook, D., & Mulrow, C., & Haynes, R.(1997) Systematic reviews: synthesis of best evidence for clinical decisions. *Annals of Internal Medicine*, 126(5), 376-80. <https://doi.org/10.7326/000374819712657199703010700006>
- Dolák, J., & Šobánová, P. (2019). *MUSEUM PRESENTATION*. Olomouc, Palacky University.
- Egger. (2001). *Systematic reviews in health care*. Cambridge University Press
- Falk, J., & Deirking, L. (2000). *Learning from museums: visitor experiences and making meaning*. Rowman & Littlefield Publishers.
- Fouseki, K., & Vacharopoulou, K.(2013). Digital Museum

- Collections and Social Media: Ethical Considerations of Ownership and Use. *Journal of Conversation and Museum Studies*, 11(1), 1-10. <http://dx.doi.org/10.5334/jcms.1021209>
- Friedrichsen, M. (2013). Social Media in Companies. Integrated Approach for a Social Media Strategy. In: Friedrichsen, M., Mühl-Benninghaus, W. (Eds.), *Handbook of Social Media Management. Media Business and Innovation*. Springer, Heidelberg. https://doi.org/10.1007/978-3-642-28897-5_3
 - Gabriel Ganascia, J.(2019). *Views and Examples on Hyper-Connectivity*. Springer, Cham. https://doi.org/10.1007/978-3-319-04093-6_13
 - Gaines, B. R. (2019). From facilitating interactivity to managing hyperconnectivity: 50 years of human-computer studies. *International Journal of Human-Computer*, 131, 4-22. <https://doi.org/10.1016/j.ijhcs.2019.05.007>
 - Glass, G.V. (1976). Primary, Secondary and Meta-Analysis of Research. *Educational Researcher*, 5(10), 3-8. <https://doi.org/10.3102/0013189X005010003>
 - Humbatov, S. (2015). *Brand Management with Social Media*. Anchor Academic Publishing.
 - Icom Russia, (2014). *NEW INFORMATION AND COMMUNICATION TECHNOLOGIES FOR MUSEUM DEVELOPMENT*, Russia.
 - Jahanshahi A. (2020). Media management in data and digitalism era. *Media Management*, 8(50), 6-8. <https://www.magiran.com/p2193615>
 - Janssen Danyi, C., & Chaudhri, V. (2018). Strategic Social Media Management for NGOs. J. Servaes (Eds.), *In book Handbook of Communication for Development and Social Change*. Springer. https://doi.org/10.1007/978-981-10-7035-8_72-1
 - Kang Lin, H., Harding, H., & Chen, C. I. (2016), A Hyperconnected Manufacturing Collaboration System Using the Semantic Web and Hadoop Ecosystem System. *Procedia CIRP*, 52, 18-23. <https://doi.org/10.1016/j.procir.2016.07.075>
 - Kaplan, A., & Heanlein, M. (2010). Users of the World, Unite! The Challenges and Opportunities of Social Media. *Business Horizons*, 53(1), 59-68. <https://doi.org/10.1016/j.bushor.2009.09.003>
 - King, L., & Harrocks, C. (2010). *Interviews in Qualitative Research*. Sage Publications.
 - Luiza Pop, I., & Borza, A, (2016). Technological innovations in museums as a source of competitive advantage”, In *Proceedings of the 2nd International Scientific Conf. SAMRO*, Sibiu, Romania, 14–16 Oct. 2016. 1, pp. 398–405. [Online]. Available: <https://mpr.ub.uni-muenchen.de/id/eprint/76811>. (in English)
 - Marakos. P. (2014). MUSEUMS AND SOCIAL MEDIA: MODERN METHODS OF REACHING A WIDER AUDIENCE. *Mediterranean Archaeology and Archaeometry*, 14(4), 75-81.
 - Naghizadeh, R., Elahi, S., Mateghi., M., & Ghazinoory, S. (2015). The Meta-Synthesis of Regional Innovation Models: A Review of 1990–2013. *Innovation Management Journal*, 3(4), 25-56. https://www.nowavari.ir/article_14737.html?lang=en
 - Rjee, B., & Choi, Y. (2015). Using Mobile Technology for Enhancing Museum Experience: Case Studies of Museum Mobile Applications in S. Korea. *International Journal of Multimedia and Ubiquitous Engineering*, 10(6), 39-44. <https://doi.org/10.14257/ijmue.2015.10.6.05>
 - Vaz, R., Fernandes, P. O., Rocha Veiga, A. C. N. (2018). *Interactive Technologies in Museums: How Digital Installations and Media Are Enhancing the Visitors' Experience*. USA. IGI Global pub.
 - Roger, W., & Dominick, J. R. (2005). *Mass media research: an Introduction*. Soroush Publications. (Published Original Work 1996)
 - Rupali, S. (2018). The Connected Museum: Role of the Changing Museums in Changing World. *International Journal of Advance Research in Science and Engineering*, 7(5), 197-206.
 - Shirkhodai, M., Shahi, M., Nejat, S., & Mahmudi, S. (2018). The Effect of Social Media on Trust and Brand Loyalty Formation in the Brand Community (Case Study: The Social Network of Instagram). *New Marketing Research Journal*, 7(3), 107-124. <https://doi.org/10.22108/nmrj.2017.103055.1181>
 - Silva, M. (2015). A Systematic Review of Foresight in Project Management Literature. *Procedia Computer Science*, 64, 792-799. <https://doi.org/10.1016/j.procs.2015.08.630>
 - Thomas, L., & Woodside, J. (2016). Social media maturity model. *International Journal of Healthcare Management*, 9(1), 67-73. <https://doi.org/10.1080/20479700.2015.1101940>
 - Toshiko Iwasaki, S. (2017). *Social media and museums: reframing audience engagement in the digital communication age*. San Francisco University.
 - Van Looy, A. (2015). *Social media management: technologies and strategies for creating business value*. Tehran University Publications. (Original work published 2016)
 - Wellman, B. (2001). Physical Place and Cyberplace: The

Rise of Personalized Networking. *International Journal of Urban and Regional Research*, 25(2), 227-252. <https://doi.org/10.1111/1468-2427.00309>

• Zimmer, L. (2006). Qualitative meta-synthesis: a question of dialoguing with texts. *Journal of Advanced*, 53(3), 311-318. <https://doi.org/10.1111/j.1365-2648.2006.03721.x>

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HOW TO CITE THIS ARTICLE

Tajik, M. A., Azizabadi Farahani, F., Masoudi, O. A., & Farhangi, A. A. (2025). Identifying the Factors Affecting Social Media Management in Hyperconnected Museums Based on a Meta-Synthesis Approach. *Tourism of Culture*, 6(20), 64-71.

DOI: 10.22034/toc.2025.493076.1175

URL: https://www.toc-sj.com/article_219043.html?lang=en

