

Doctoral (PhD) thesis

„To post or not to post?”

An examination of Hungarian museums’ use of
Instagram in terms of content, form, and
engagement

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1. The objective of the thesis, defining the topic

The aim of the thesis was to conduct a comprehensive study of the communication practices of Hungarian museums on *Instagram*. With the changing social role of public collections, the acceleration of digitalisation, and the transformation of the cultural habits of the public, the conscious use of social media has become an increasingly significant challenge for museums. The research focused on exploring the factors – institutional, content-related, formal and timing-related characteristics – that determine user activity on Instagram and how museums can use the platform to serve their strategic goals.

The choice of topic is justified, on the one hand, by changes in the communication environment of cultural institutions. Today, visitors are no longer addressed solely in the exhibition space; the presence of institutions on social media determines their visibility, accessibility and social embeddedness. On the other hand, the quality of digital communication in the cultural sector is becoming increasingly important in terms of funding (digital visibility) and the expectations of maintainers (efficiency).

From a theoretical perspective, the dissertation was based on the concepts of “*new museology*” and “*Museum 2.0*”, which emphasise the importance of audience engagement, two-way communication and interactive participation. Public collections are therefore not only exhibition spaces, but also community spaces where online and offline spaces reinforce each other. The examination of *Instagram* was justified by the visual nature of the platform, its young target audience, and the creative opportunities it offers to cultural institutions.

The research fills a gap, as several analyses have already been published in international literature (e.g. in connection with museums in Berlin, Prague, Rome and London) on the role of social media, but only sporadic studies have been available on the Hungarian museum sector to date. This dissertation is therefore the first to provide a comprehensive analysis covering five years, with a large sample size, combining quantitative and qualitative methods.

The main questions of the research were as follows:

- Does the type of institution (national or regional) influence activity measured on Instagram?
- Which content categories prove to be the most effective in reaching the audience?
- How do formal characteristics (integration of *Call To Action* tools, carousel – simultaneous sharing of multiple content, captions, and use of hashtags) affect the development of interactions?
- What role does timing (weekdays or weekends) play in the success of posts?

A total of six main hypotheses were formulated in the thesis, accompanied by sub-hypotheses that examined the impact of institution type, content, formal solutions, hashtags, timing, and the pandemic environment on activity.

The importance of this topic lies in the fact that digital communication plays a key role in strengthening the social role of public collections. Increasing visitor numbers,

reaching out to audiences, and expanding access to cultural assets are all closely linked to the quality of online presence. In addition, digital communication not only serves to convey existing cultural values, but also contributes to the creation of new digital cultural values.

The research is further significant in that museums are using social media to build new types of relationships with their audiences that go beyond the traditional visitor experience. Interactions in the online space not only increase the visibility of museum services, but also contribute to strengthening community participation and cultural democratization. Instagram provides museums with an opportunity to engage in dialogue with visitors, actively involve them in content creation, and thus create new frameworks for interpreting cultural heritage.

2. Outline of the methods used

The research was based on a mixed methods approach, combining quantitative and qualitative methods. This choice ensured that, in addition to the statistical analysis

of the data, the underlying institutional practices and strategies were also explored. The methodological diversity contributed to the study not only providing numerical indicators, but also offering a contextual interpretation of digital communication practices in the Hungarian museum sector.

2.1. Sampling

Nine Hungarian museums were included in the study, representing different types of national, regional, and local institutions. The selection criteria included geographical diversity (institutions in Budapest and the countryside), the background of the maintainers (state, foundation, and local government), and thematic diversity (history, fine arts, ethnography, and historical sciences). The sample thus provided a comprehensive picture of the characteristics of the Hungarian museum sector.

2.2. Data collection

Empirical data collection took place in two phases:

- In the first phase (2019-2021), 2,239 posts were processed. This ensured the identification of

preliminary trends and the testing of the methodology;

- The second phase (2019-2024) covered the entire period, with 7,333 posts examined.

The data was recorded through autopsy, manual note-taking, and Excel spreadsheets. During the study, all relevant data related to the posts was recorded, such as the number of likes, comments, and shares; hashtags; CTA elements; carousel format characteristics; captions; timestamps (to the exact day). The subject of the study was therefore shared image content; other content types associated with the platform (Reels and Stories) were not included in the study.

2.3. Content categories

I classified the posts into ten content categories (e.g., artwork, exhibition, educational, advertising, community, content related to special days). This type of categorization process made it possible to compare different types of posts and helped to reveal what kind of content generates more activity.

2.4. Quantitative analyses

Activity was measured using the engagement rate (*ER*), which was calculated as the ratio of interactions to followers. This ensured comparability between institutions even with follower bases of different sizes.

- Missing follower counts were estimated using linear regression based on time series for each institution.
- Posts were compared using normalized indicators, allowing differences in activity to be interpreted from a statistical perspective.
- Comparing the results with the *RivalIQ* non-profit benchmark made it possible to place the performance of Hungarian museums in an international context.

2.5. Qualitative analyses

The quantitative data was supplemented by semi-structured interviews conducted with museum communications specialists. These highlighted the strategic considerations, institutional resources, and

internal challenges behind online activity. The interviews primarily served to contextualize and explain the results, which helped to map the existence and characteristics of online communication strategies.

2.6. Contextual factors

The study paid particular attention to the *COVID-19* pandemic, which, in parallel with the forced closure of museums, led to an increase in the importance of online communication, as a result of which digital presence became a strategic factor for many institutions. During the research, I performed a correlation analysis to examine the relationship between restriction levels and changes in activity.

3. Summary of results

H1: The type of institution influences activity

- National museums generated on average ten times as many interactions as regional institutions. This difference is due not only to the number of

followers but also to professional communication strategies.

- However, smaller institutions had a higher comment/post ratio, which indicates closer community integration;
- Museums with a conscious strategy showed higher *ER* values.

H2: The nature of the content is decisive

- Community-building, promotional, special occasion-related, and scientific posts generated the most activity;
- Educational and public interest information generated significantly lower interaction.

H3: The impact of formal elements

- Posts containing CTAs were rare, but when used, they resulted in a measurable increase in activity;
- The carousel format generally increased engagement compared to single-image posts;

- The presence of captions had a positive effect on activity, although statistical limitations made it difficult to measure accurately.

H4: The role of hashtags

- The effect of hashtags varied by institution, increasing interaction for some and having no effect for others.

H5: Timing

- Weekend posts increased activity for some museums, but the effect was not universal.

H6: *COVID-19* effects

- Posting frequency increased during the pandemic;
- The level of interaction showed mixed results, not increasing in all cases;
- A positive correlation was observed between closures and activity at some institutions;
- Higher levels of communication persisted at several institutions after the pandemic.

3.1 Reflections and theoretical interpretation

The primary goal of this paper was to measure the effectiveness of museums' *Instagram* communication, but the interpretation of the results cannot be separated from the cultural and institutional context. The data showed that the performance of posts is closely linked to institutional size, image, and mission: smaller museums engaged in more direct, community-oriented communication, while national institutions employed more professional but less interactive strategies. *Instagram* content is thus not only a technical tool, but also a digital projection of the museum's mission, as it serves to showcase the collection, transfer knowledge, engage with the community, and increase visitor numbers. In the wake of the *COVID-19* pandemic, several institutions have undergone a lasting change in attitude, elevating digital communication to an integral part of museum knowledge production and self-representation.

4. Summary

The results of the research show that the success of Hungarian museums' *Instagram* communication is not determined by a single factor, but by a complex combination of institutional, content, form, and timing characteristics. The advantage of national museums is unde

niable, but the community embeddedness of smaller institutions is a unique resource. The type of content is a key factor, with posts offering emotional engagement proving to be the most successful. Formal solutions (carousel, CTA, image captions) also contributed to increased activity, while the impact of hashtags varied from institution to institution. The role of timing is not universal, but in some cases it provided an advantage. The *COVID-19* period led to an increase in the importance of digital presence and triggered lasting changes in several institutions.

The theses as a whole prove that Instagram is not merely a supplementary tool in museum communication, but a platform of strategic importance that simultaneously

serves to engage the audience, increase institutional visibility, and strengthen social engagement. The dissertation contributes to the domestic academic discourse on digital museology, while also offering practical guidance for museums in the areas of data-driven decision support, conscious communication strategy, and more effective audience engagement. Instagram content can also be interpreted as a tool for museums to represent themselves, appearing as digital projections of their collections, knowledge transfer, community embeddedness, and cultural identity.



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List of publications related to the dissertation

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- Csont, I.:** Múzeumok digitális jelenléte a Covid19-járvány alatt: A közösségi média szerepe és kihívásai.
In: Múzeumi örökség és múzeumi kommunikáció. Szerk.: Jakab Albert Zsolt; Vajda András, Kriza János Néprajzi Társaság, Kolozsvár, 109-130, 2024, (Kriza Könyvek ; 50.) ISBN: 9786069015391
- Csont, I.:** Virtuális technológiák a múzeumban.
In: Történelmi és néprajzi örökségek az ókortól napjainkig. Szerk.: Nagy Monár Miklós, Körösparti Péter, Győrffy István Néprajzi Egyesület, Karcag, 85-128, 2020. ISBN: 9789637354083
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Foreign language international book chapters (2)

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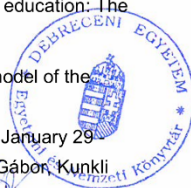




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