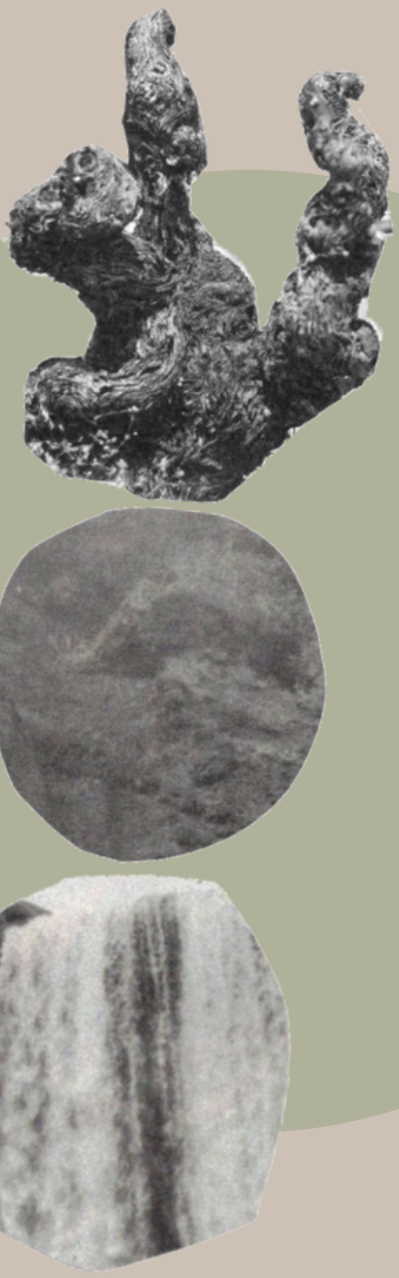

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MUSEUM EDUCATION:

Fundamental and Approaches

MUSEUMS serve as inclusive spaces where knowledge (embedded in digital artefacts and mediators) supports cognitive, emotional and social development, fostering deeper connections with culture and history. In relation to this, in 2022, the International Council of Museum (ICOM) developed a more updated definition of what is meant by a museum.

A museum is a not-for-profit, permanent institution in the service of society that researches, collects, preserves, interprets and exhibits tangible and intangible heritage. Open to the public, accessible and inclusive, museums foster diversity and sustainability. They operate and communicate ethically, professionally and with the participation of communities, offering varied experiences for education, enjoyment, reflection and knowledge sharing.

In relation to this, focused on accessibility and inclusion, museum education aims to engage visitors, improve their understanding and foster a deeper appreciation of cultural, historical or scientific content to foster active citizenship and lifelong learning in a non-formal learning context.

Innovative approaches to museum education

Historically, museum education has focused on the transmission of actual information through guided tours and lectures, emphasizing the curator's expertise. This approach often positioned visitors as passive recipients of knowledge. However, scholars like John Dewey recognized the educational potential of museums, advocating for experiential learning that encourages visitors to actively engage with exhibits. (Hein, 2004)

While tour and lecture formats continue to be used, approaches have evolved and the range of programs offered to the public has expanded. Moving from didactic to interactive and participatory methods, influenced by constructivist theories that view learning as an active and contextualized process, museums continue to play a crucial role in education, fostering lifelong learning and cultural appreciation.

Innovative strategies include:

- **Diverse Programs:** Offering a broad range of programs not only to cater to all age groups but also to accommodate varied learning styles. Examples include art therapy classes or craft workshops that emphasize learning through making, expanding the educational role of museums beyond traditional learning outcomes. (Wei et. al., 2023) Another well-established example are talent development and orientation programs, which provide career guidance opportunities for teenagers and teach future visitors how to engage with cultural materials.

- **Interactive Exhibits:** Designing exhibits that encourage hands-on engagement, allowing visitors to explore and discover information independently.

- **Digital Learning:** Incorporating digital technologies, such as digital collections, virtual tours, virtual reality experiences, mobile apps, and social media platforms to create immersive learning experiences.

Photography of Hungarian National Museum

Digital transformation in museum education

Digital technologies have transformed museum education, changing the way museums interact with their public, interpret collections and deliver educational content. By integrating digital tools, museums have extended their reach and created dynamic, interactive and personalized learning experiences, offering visitors immersive and engaging ways to interact with exhibitions. These tools allow museums to offer a deeper contextualisation of objects, bridging the gap between static display and dynamic storytelling. Digital learning technologies can be divided into two broad categories: digital on-site learning and digital distance learning.

On-site digital learning

On-site digital learning enhances museum experiences through interactive technologies like audio tours, QR-linked guides, and online quizzes. GPS-enabled audio headsets provide location-based information, while AR overlays historical reconstructions, and VR immerses users in different eras and locations. VR has been used in transnational projects, such as the Danube Transnational Programme, to showcase archaeological sites from nine European countries. VR experiences can be structured with guided narration or free-form for independent exploration, with live educators adding deeper insights.

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Distance digital learning

Digital platforms have enabled museums to offer distance learning opportunities that eliminate the need for visitors to be physically present. These methods have become particularly relevant during events like the COVID-19 pandemic and continue to benefit visitors today. In addition to special cases, distance digital learning can prove to be important in distance education as well, and it can serve as a strong pillar for the material of cultural diplomacy. Downloadable museum pedagogical materials and tasks can provide prior knowledge to future visitors, and instructors can use them as a tool before their visit to a foreign museum, or even for comparison purposes as well.

The most traditional digital tools are virtual tours, followed by online exhibitions that present the museum's reality in a display-friendly format. Digital tools also enable interactive approaches, such as online games, quizzes, or interactive webinars designed around a virtual tour or an online exhibition.

Digital technologies have transformed museum education by enhancing accessibility and engagement. They allow remote participation, breaking geographical barriers and facilitating inclusion for individuals with disabilities or mobility constraints (Tzortzi, 2021; Kelly, 2021). Features like text-to-speech, subtitles, and multilingual options improve inclusivity, while AI-driven platforms personalize learning experiences (Drotner et al., 2018).

However, digitalization also presents challenges. The digital divide limits access for some audiences, exacerbating inequalities (Walsh-Pister et al., 2020). High implementation costs are challenging, especially for smaller museums (Marty, 2014), and the digital skills gap among educators can be a barrier to effective use. Furthermore, overreliance on digital tools can reduce engagement with physical exhibits. A balanced approach, integrating digital and in-person experiences, ensures that technology enhances, rather than replaces, traditional museum education.

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