
Florence HeriTech

Online conference

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A person's hands are holding a white smartphone in front of a framed painting. The smartphone screen displays an augmented reality overlay. The background of the screen is a painting of a man in historical attire holding a book. Overlaid on the screen is a semi-transparent grey box containing white text. The text includes a bold title and a question. The person's hands have light pink nail polish.

Paper title

How can augmented reality improve the user experience of digital products and engagement with cultural heritage outside the museum space?

Abstract

The purpose of this study is to understand how **augmented reality** is improving the **user experience of cultural heritage and museums** by **making it more engaging and allowing the user to better remember the information relayed**. Specifically, this study aims to better understand the use of augmented reality, and **how institutions are making use of it by interviewing people involved in two apps** that operate outside the museum space. This study can conclude that augmented reality **has improved the information delivered and some aspects of the user experience**. However, it is difficult to argue that augmented reality is completely improving the user experience of cultural heritage and museums

Challenges

Museums are facing “shifting demographics, evolving visitor expectations, funding realignment, and ever-escalating technologies”

Gensler research

Gensler Research team, “What Is the Future of the Museum?,” Gensler, 2015,
<https://www.gensler.com/research-insight/gensler-research-institute/museum-futures>.

Visitors' motivations

- Usefulness of the museum visit
- Subjective factors such as personal meaning and interpretation
- Opportunities for interaction

Poria et al, "Heritage Site Perceptions and Motivations to Visit," *Journal of Travel Research* 44, no. 3 (February 1, 2006): 318–26, <https://doi.org/10.1177/0047287505279004>.

Visitors' expectations

- Context
- Re-enactment
- Embodiment (senses during a visit)
- Self-projection (empathy)
- Possibilities of being

Pallud J and Monod E 2010 User experience of museum technologies: the phenomenological scales EJIS 19, no. 5 562–80, <https://doi.org/10.1057/ejis.2010.37>

Museums' responses

Cultural events

Interactive experiences

Digital collections

Immersive experiences

Curated exhibitions

Activities and workshops

Immersive experiences

The 5 best museum AR/VR experiences this summer

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[Guest Writer](#) June 14 2018

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5 Reasons Why Museums Are Using AR Technology

March 25, 2019 by Camila Kohles

 MuseumNext

Confere

Augmented Reality in the Museum

[← All Films](#)

Focus

- Better understand the use of **Augmented Reality**, and how museums are making use of it.
 - Look at case studies outside the museum space, examining how this technology is improving both **user experience and the information** delivered.
 - How the **museums themselves perceive this technology** and how, if at all, this new technology have **benefited them**.
-

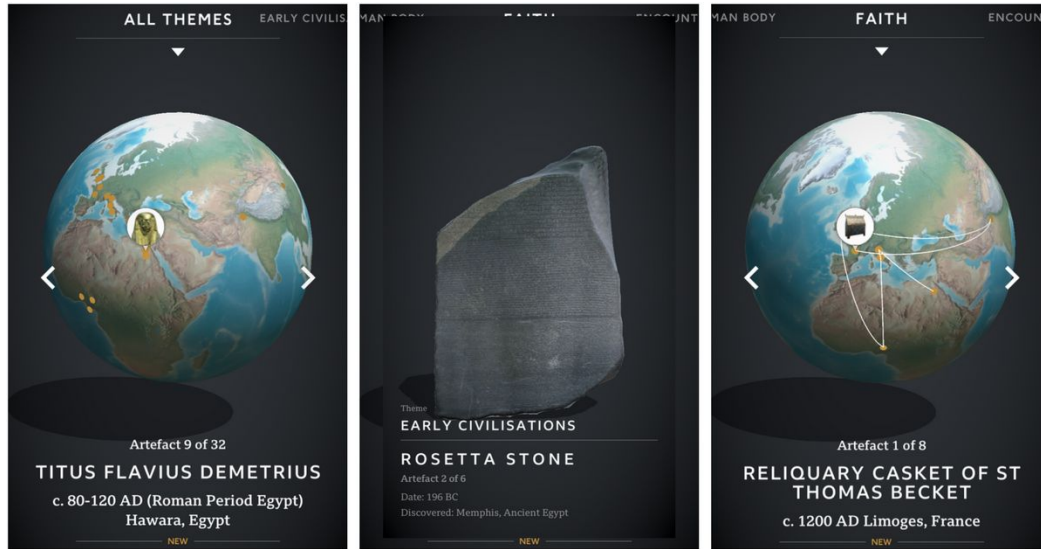
Research and methodology

Qualitative research

Methods:

- o Auto-ethnographical case studies
 - o Semi-structured interviews
-

Case studies



BBC Civilisations



English Historic Cities

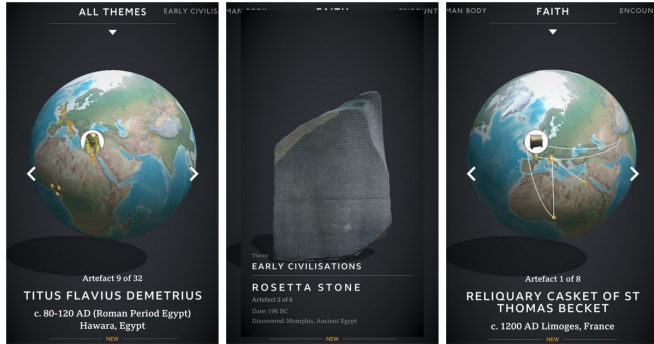
Interviews

- ✓ Expert 1 (Production background - BBC)
 - ✓ Expert 2 (Production background - English Historic Cities)
 - ✓ Expert 3 (Museum background - Cuming)
 - ✓ Expert 4 (Museum background - NM of Scotland)
 - ✓ Expert 5 (Museum background - Wiltshire)
 - ✓ Expert 6 (Museum background - English Historic Cities)
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Process

- Literature review (April / May / June 2019)
 - Interview expert (end May - beginning June 2019)
 - Analysis of interviews: (June 2019)
 - AR experience
 - Motivations / Goals
 - Frustrations / Constraints
 - Case studies analysis: (June/July 2019)
 - User experience
 - Information
 - Conclusions (August 2019)
-

Case studies



BBC Civilisations

The app engaged the user with its use of AR and unique functionalities such as hotspots. However, the technical constraints of the technology made that experience less engaging. Also, the author could see that after using the app after a while, there was little desire to come back to it, potentially making it a one-off experience.



Case studies

English Historic Cities

The EHC app allowed the user to experience cities in a new way by using AR to deliver more information, and engaged the user with the novelty of the technology. However, the technical constraints of the phone and the AR technology made part of that experience less engaging.

Interviews topics

- Institutions making use of AR
 - AR Benefits
 - AR Limitations
 - Has AR improved the UX of digital projects?
 - How was the information and content delivered through AR?
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Conclusion

- The institutions see **that storytelling, a rich-content environment and putting experiences in context** are ways to spark people's imaginations.
 - It is difficult to conclude that AR is completely improving the UX of cultural heritage and museums by making it more engaging.
 - Institutions are making use of AR primarily **to raise awareness of their collections and capture new audiences attention**, and to make those collections more accessible by giving online access to them when physical access is limited.
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Conclusion

- The institutions' perceptions of AR is as a technology that **doesn't dominate the whole experience** and will never replace the real experience.
 - Some of the benefits AR has brought to the institutions are it that helps to **enhance the objects and places by making them feel more alive**, helps the user to put them in context, and connects the user with their past.
 - Technical limitations such as **ambient conditions** reducing visibility, the negative effect on **phone battery** life and the **lack of compatibility** with mobile devices will remain until such time as mobile phones improve.
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Thank you!

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