

Co-Minecrafting Hermoupolis with Children

a Minecraft-based Digital Twin for Architectural Heritage Education

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Introduction

- How do we engage children with cultural heritage?
- Minecraft as a co-creative platform
 - Beyond just a game
 - A collaborative environment to explore and understand cultural and architectural heritage
- Our questions:
 - How do children interpret and translate real-world architectural heritage into a voxel-based and constrained environment like Minecraft?
 - In what ways this participatory process fosters a sense of ownership, place, and engagement with cultural heritage?

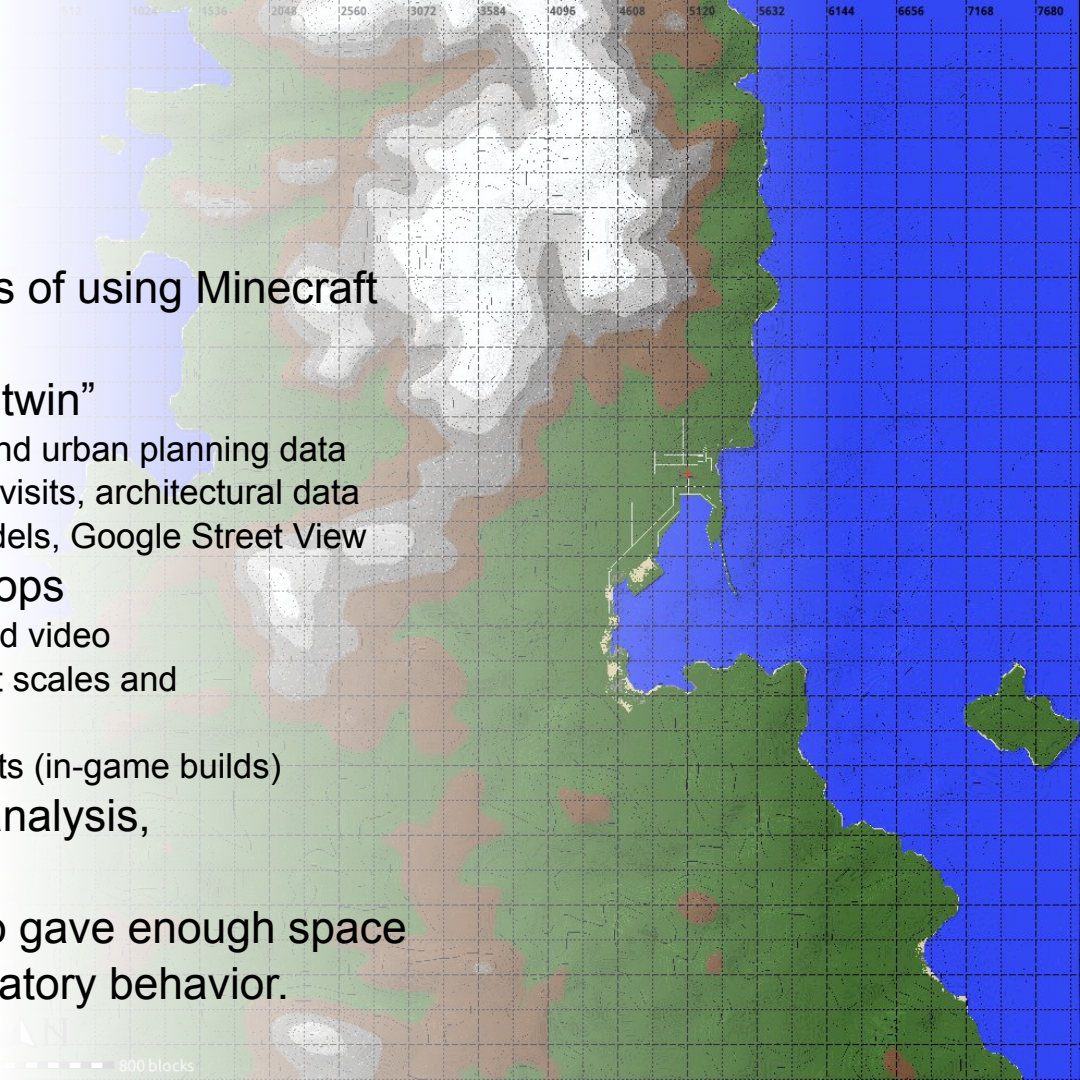


Background: Who and How

- Who: 8 children, ages 8-12
 - Children already attending a local "Young Tour Guides" (Μικροί Ξεναγοί) program.
- How: A three-month project
 - Bi-weekly, in-person meetings at the Historical Museum of Hermoupolis
- Collaborative building on a 1:1 scale Minecraft map
 - World setup was done by us, using height maps of the island
 - Custom design of the city plan, to ensure a north-south alignment
- Operationalizing the expertise of Heritage Management e-Society NGO and the “Young Tour Guides” program

Methodology

- Building upon existing approaches of using Minecraft as an educational tool
- World setup - creating the “digital twin”
 - For setting up the map: Geospatial and urban planning data
 - For recreating the buildings: Photos, visits, architectural data from the HERMeS database, 3D models, Google Street View
- Data gathering during the workshops
 - Participant observations via notes and video
 - Post-activity questionnaire with Likert scales and open-ended questions
 - Examination of the built digital artifacts (in-game builds)
- Qualitative and interpretive data analysis, due to small sample size
- We guided specific tasks, but also gave enough space for independent action and exploratory behavior.

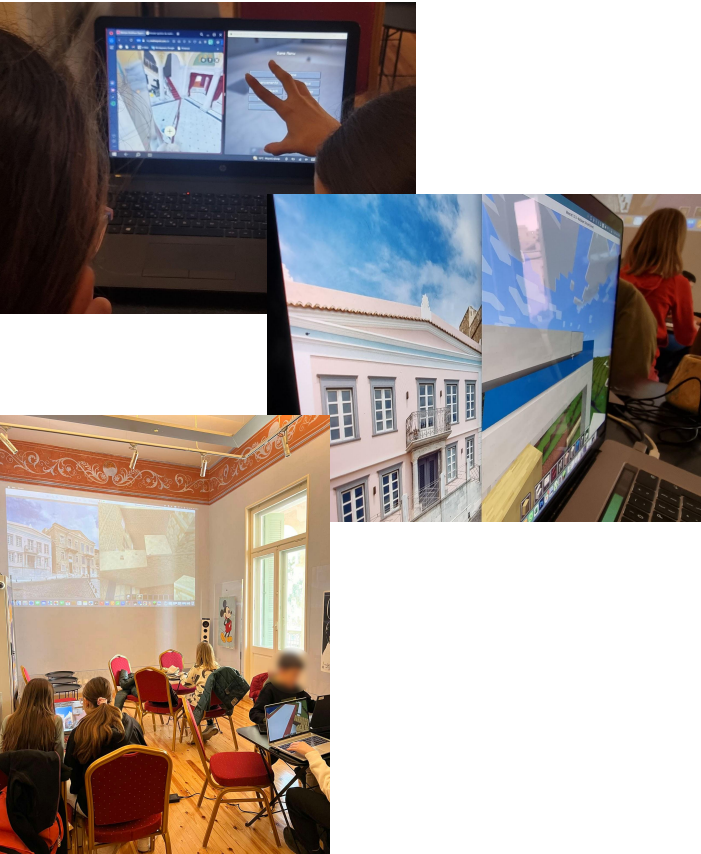


Findings: Raising awareness through building

- Developing architectural awareness through the act of construction
 - Observing architectural elements of neoclassical buildings
- The task of translating complex architecture into simple blocks forced a new level of analysis.
 - Moved beyond passive observation or simple copying of architectural elements
 - Deconstructed forms, noticed proportions, and understood style in order to recreate it.
- The game's constraints seem to have become a productive scaffold for learning.
- Ability for critical reflection on their work.
 - Possible indicator of enhancing visual literacy and deeper architectural observation.



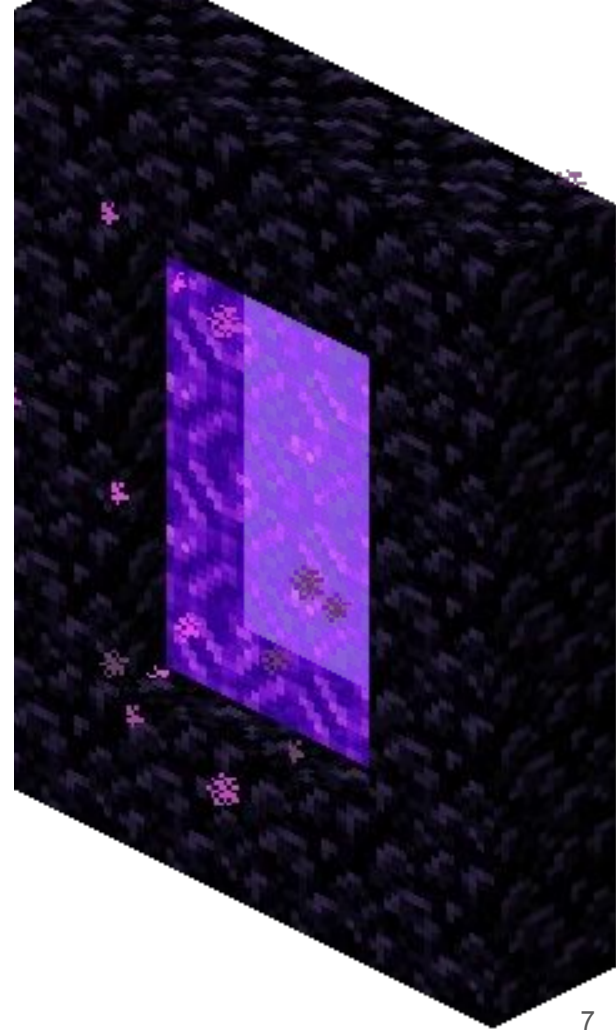
Findings: Creating a sense of ownership



- By investing effort into a building, strong emotional connections were formed
 - The "IKEA Effect", where labor led to a greater affective connection
- This was evident in their own words
 - Feeling "joy" on finishing a build
 - "Heart-breaking sadness" when time ran out.
- Children delved beyond basic construction, appropriating the tools for their own imaginative play, creating a stronger bond with their builds.
- Building their own hometown as an extra layer of sense of place.

A Tour of Hermoupolis in Minecraft

Let's visit!



Key takeaways

- The friction of Minecraft's constraints can be a powerful platform for learning
- Sense of ownership via an emotional investment
- Moving from passive consumers of history towards active interpreters and owners of their heritage.
- Challenge of balancing focused work with exploratory play.
- Future steps:
 - Scale up to larger and more diverse educational contexts, to extract better quantitative data
 - Continue building Hermoupolis in Minecraft - has already started in the context of HERMeS' Heritage Festival



Thank you!

Andrianos - Vasiliki - Alikí - Mania - Pavlos

You are the player.

Wake up.

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