



Why little big histories work (and what that means for interdisciplinary education)



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Introduction

'Little big histories' are interdisciplinary projects in which students connect a small subject of their choice to the histories of the cosmos, Earth, life and humanity, in order to gain a better understanding of how their subject fits into a big historical picture. Little big history were first developed at the UvA and have since been adopted by other universities and by thousands of high schools around the world. Yet despite their widespread use, it remains unclear why little big histories work for so many teachers and their students. What are its 'magic ingredients'? Why are these ingredients effective? And what does this mean for little big histories and for interdisciplinary education in general?

Methods - Step 1

Identify potential magic ingredients:

- Review how the little big history assignment at the UvA changed over the last 17 years based on archived course materials
- Review changes that were positively evaluated and that stuck and those that did not

Methods - Step 2

Identify why potential magic ingredients might work by reviewing literature on:

- Self-determination theory
- Proximal development + safe learning
- Interdisciplinary education
- Integration, surprise + memory
- Inquiry-based learning
- Learning styles

Methods - Step 3

Test potential magic ingredients and why they might work with the aid of:

- Teacher interviews (3 done, 3 in progress)
- Student focus groups (1 done, 1 in progress)
- Student questionnaires (2 planned for the 2023 fall semester)

'Magic' ingredients

- Free subject choice**
Provides sense of autonomy important for intrinsic motivation
- Safe subject student already knows**
Provides (sense of) competence important for intrinsic motivation and learning, particularly in interdisciplinary education that is often perceived as daunting
- Small subject + interdisciplinary big history perspective**
Small subject keeps project manageable, but hardly ever used in interdisciplinary education because interdisciplinary connections do not always seem clear and relevant
- Structure that requires students to find connections to aspects of all phases of big history**
Provides a form of scaffolding that asks students to connect very specific chunks of information, including chunks that seem unrelated at first
- Surprising connections**
Prompt explanation finding, causal elaboration and memory building
- Inquiry-based learning**
Allows for active knowledge construction
- Free format choice**
Caters to different learning styles

Results - Step 1

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- Ingredients accumulated over the years as a result of constant small changes
- Many attempts to focus on larger subjects, most notably complex scientific or societal questions, but these never worked

Results - Step 2

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- Interdisciplinary education almost always focuses on complex questions, even though these are hard to manage
- Combination of ingredients that build on each other makes it possible to apply an interdisciplinary perspective to a small, manageable subject as well

Preliminary results - Step 3

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- Importance of most ingredients and of combination of ingredients confirmed but also nuanced
- As soon as students are required to find interdisciplinary connections, their subject and learning stopped feeling safe

Conclusion for little big histories

A combination of ingredients that build on each other ensures that little big histories work. One aspect of little big histories that does not contribute to their effectiveness is the fact that many students perceive working on them as daunting. It would therefore be good to make working on little big histories feel safer.

Conclusion for interdisciplinary education

Even though complex questions require an interdisciplinary perspective, teaching and learning to apply such a perspective to these questions is often difficult. Applying an interdisciplinary perspective to a smaller and more manageable subject is also possible, addresses certain difficulties and can be used as practice.