

Virtual Anatomy & Surgery Broadcasts for Engaging Medical Education

**BC Virtual Health Grand Rounds
February 14, 2024**



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Learning outcomes

- Evaluate the use of broadcast media combined with xR in live medical education
- Review the evidence for the efficacy of these media in education
- Develop a vision for how these approaches can be leveraged in Western Canada for rural and remote medical education.

Disclosures

- Received grants from
 - Mitacs in collaboration with Microsoft Canada
 - UBC Teaching and Learning Enhancement Fund
 - UBC Strategic Investment Fund, UBC Faculty of Medicine

Mitigation of Bias

- All research and development is free from constraints
- All educational materials are made available as open educational resources

Collaboration



hive.arts.ubc.ca



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sectio-chirurgica.de

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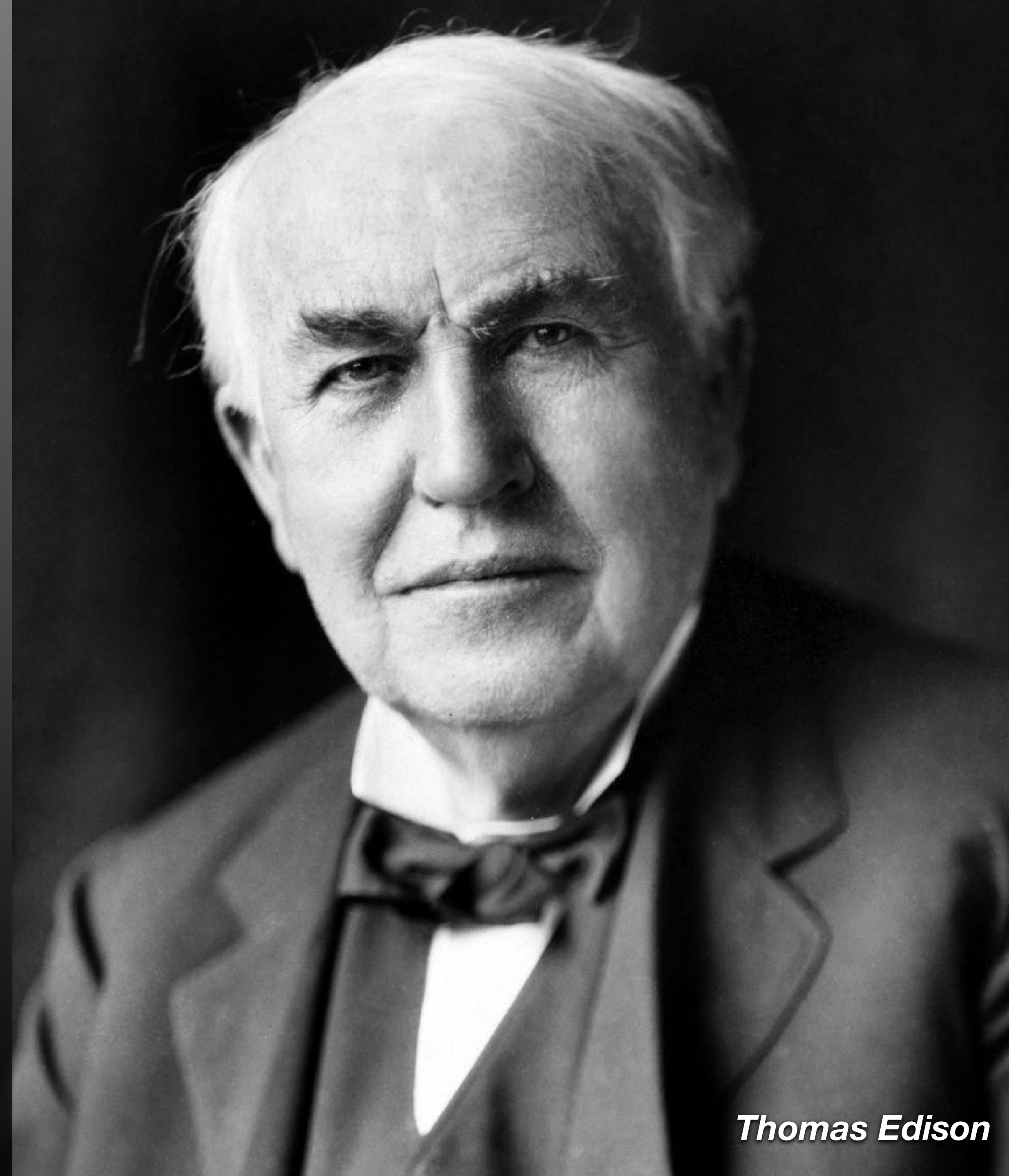


**“Books will soon be obsolete in
the public schools.**

**Scholars will be instructed
through the eye.**

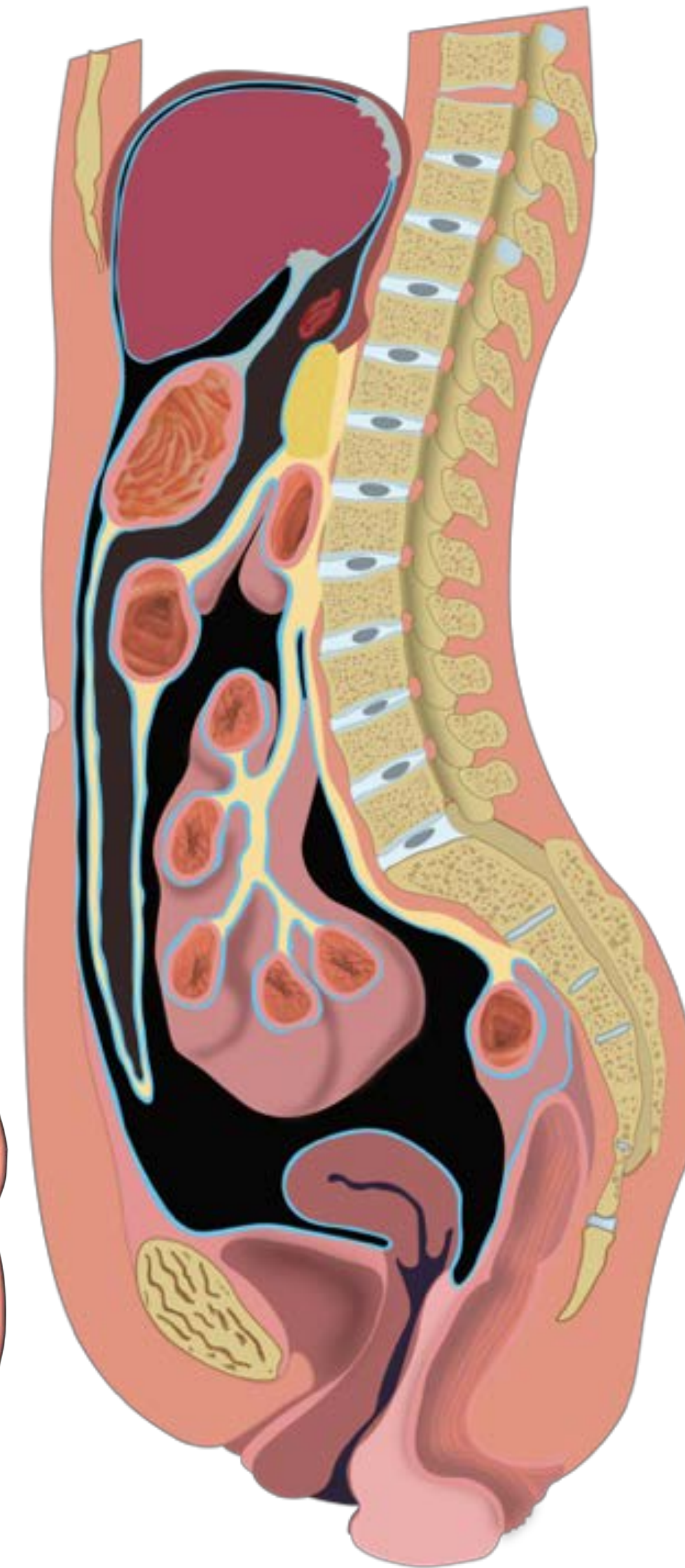
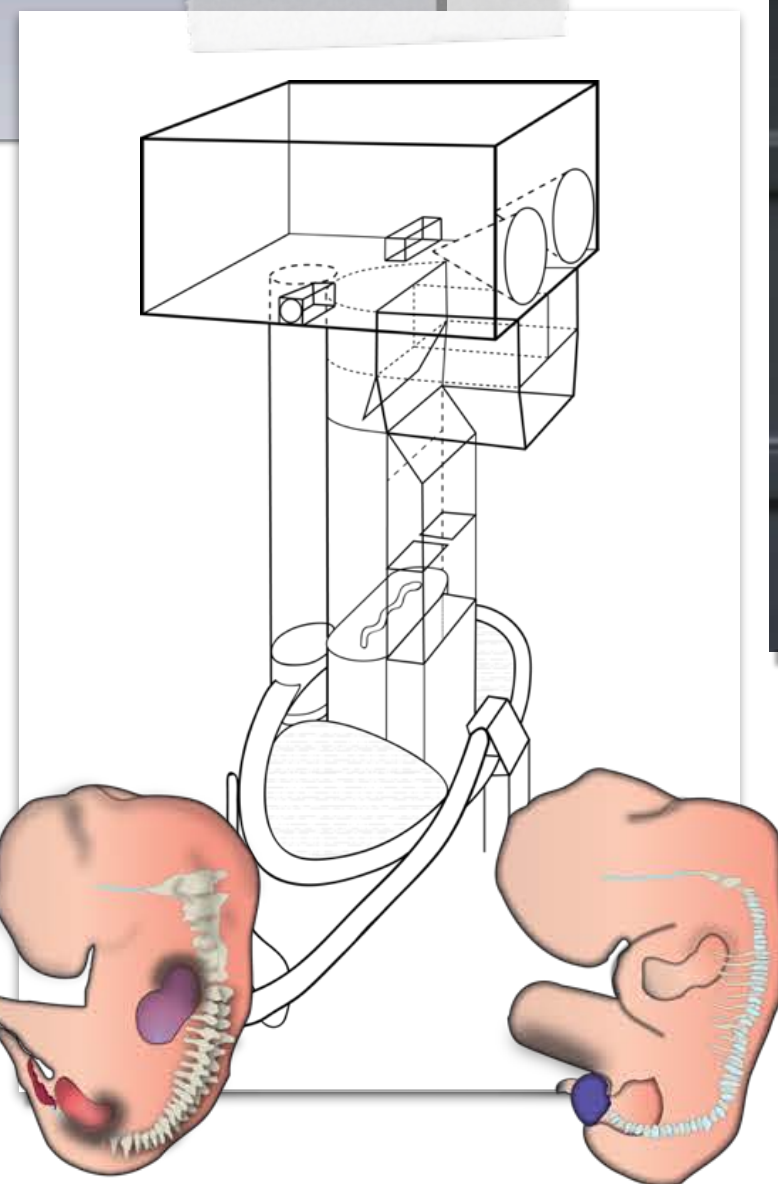
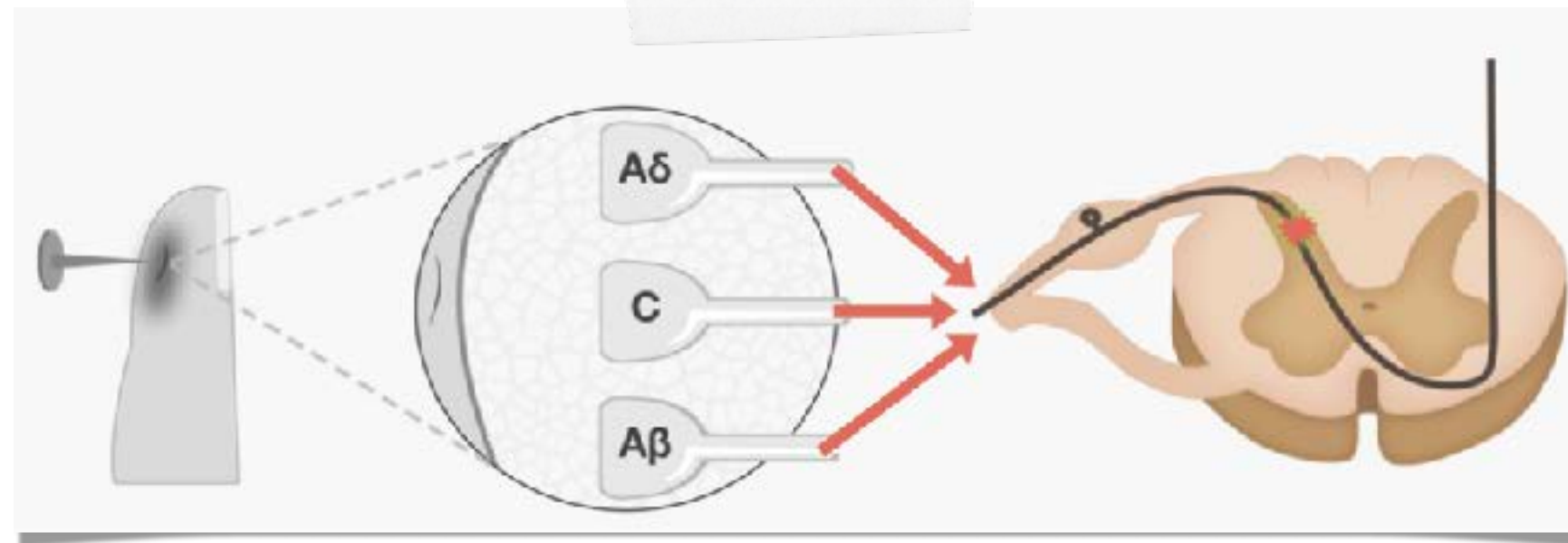
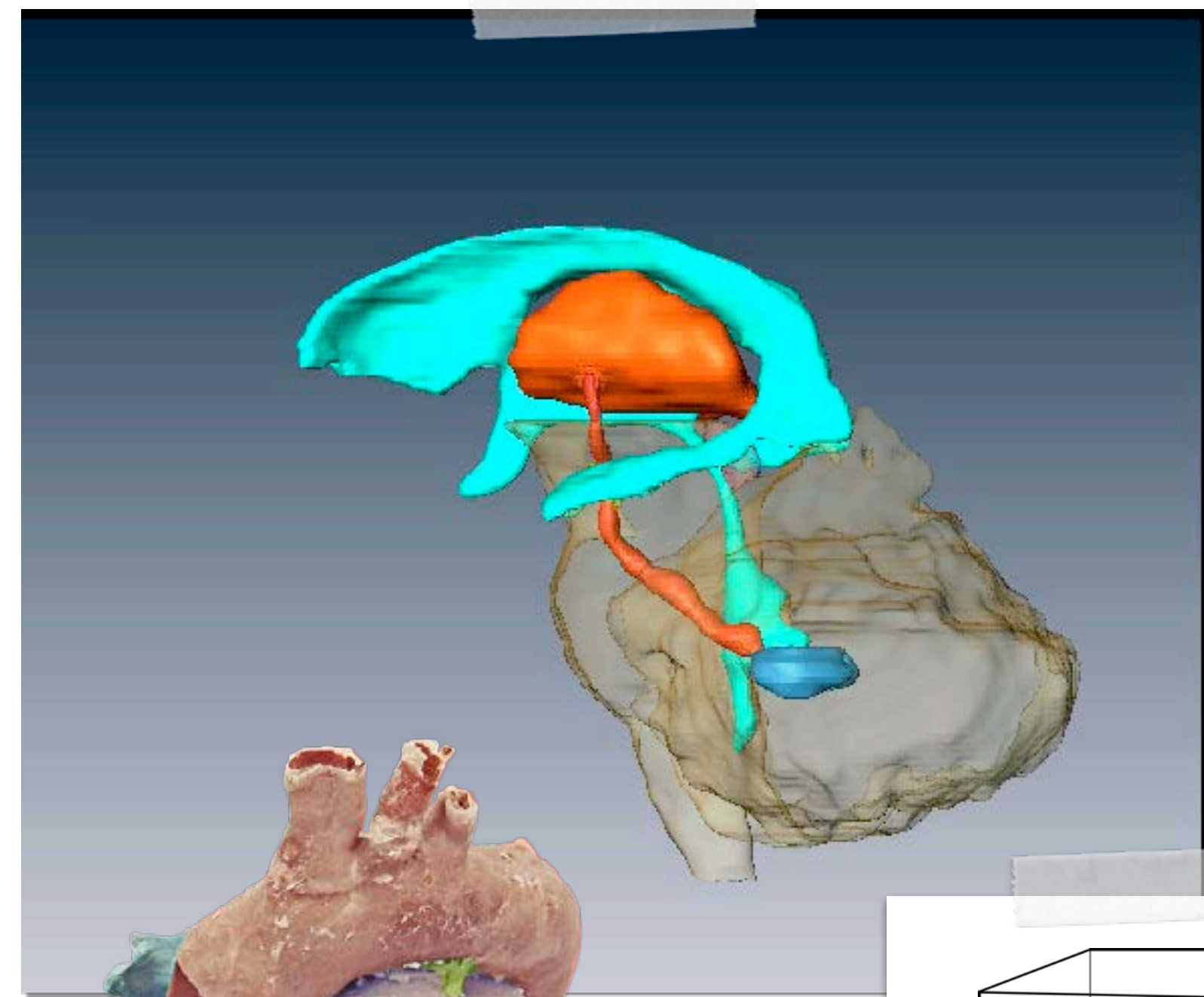
**It is possible to teach every
branch of human knowledge with
the motion picture.**

**Our school system will be
completely changed inside of ten
years”.**



Thomas Edison





www.clinicalanatomy.ca

www.neuroanatomy.ca

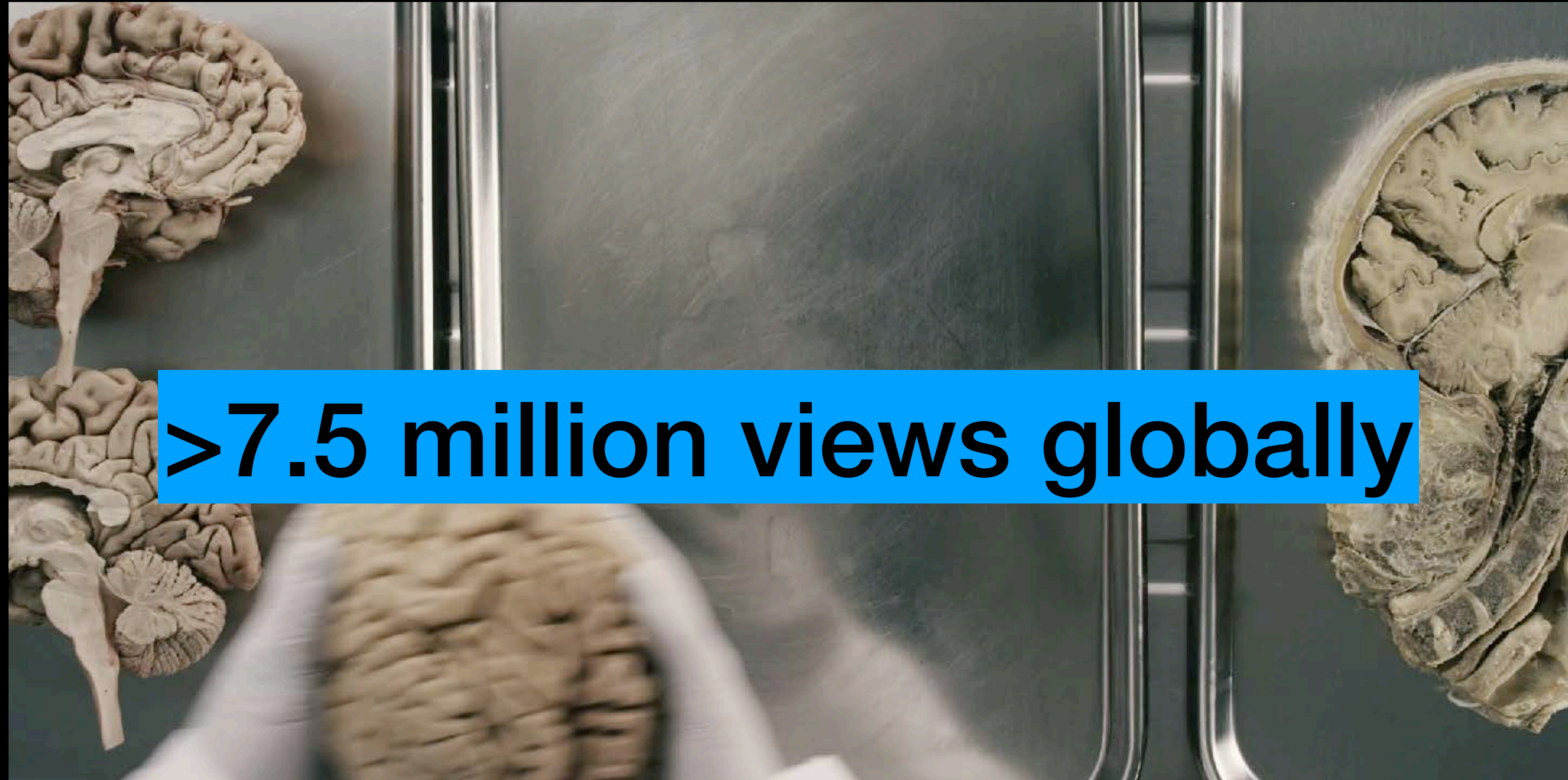
Evolving Classrooms



Video production 2014



2014



>7.5 million views globally

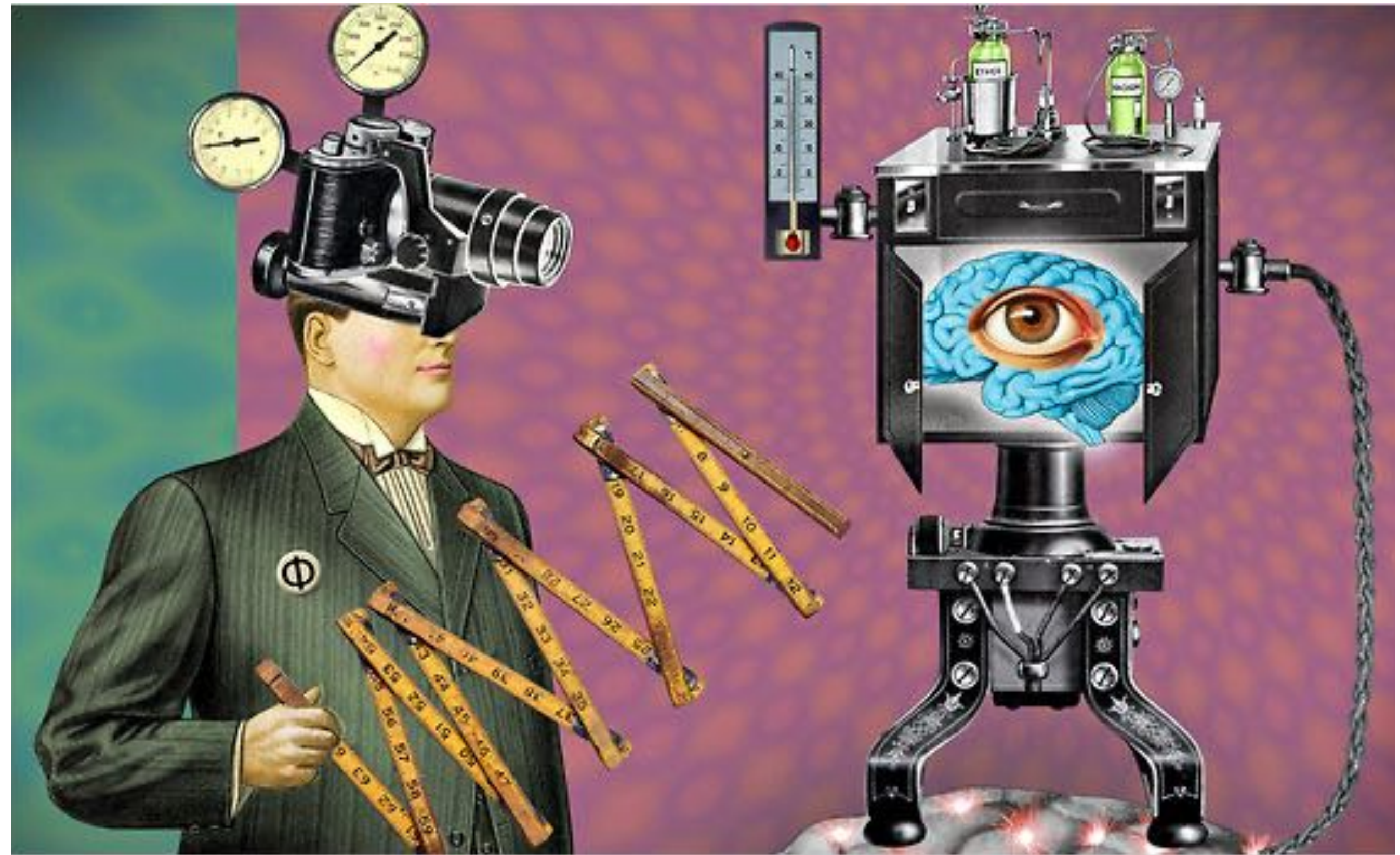
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Are we asking the right questions?

- What are the learning effects of the integrated technology?

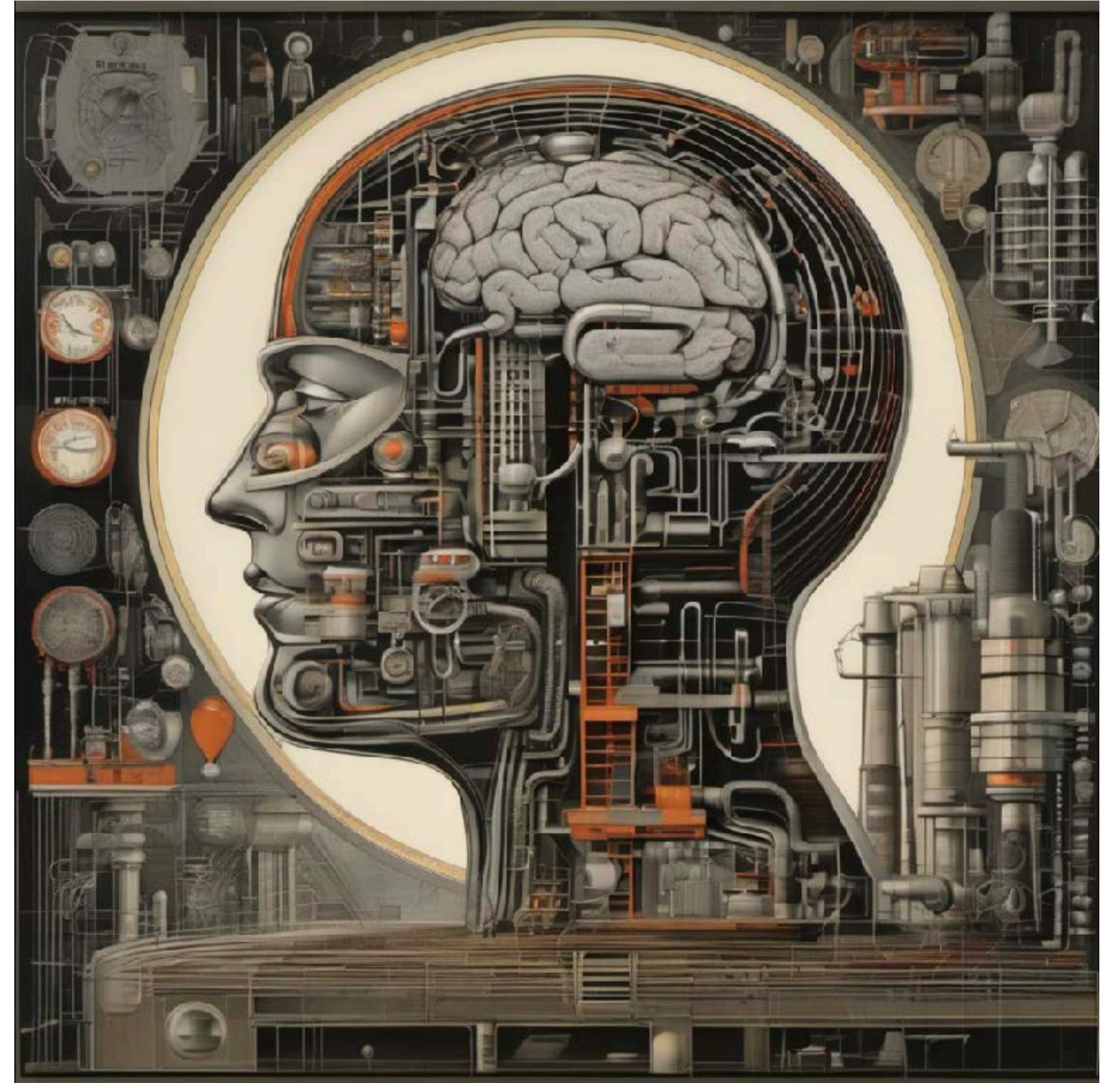
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- How did the technology augment or enhance the learning experience?

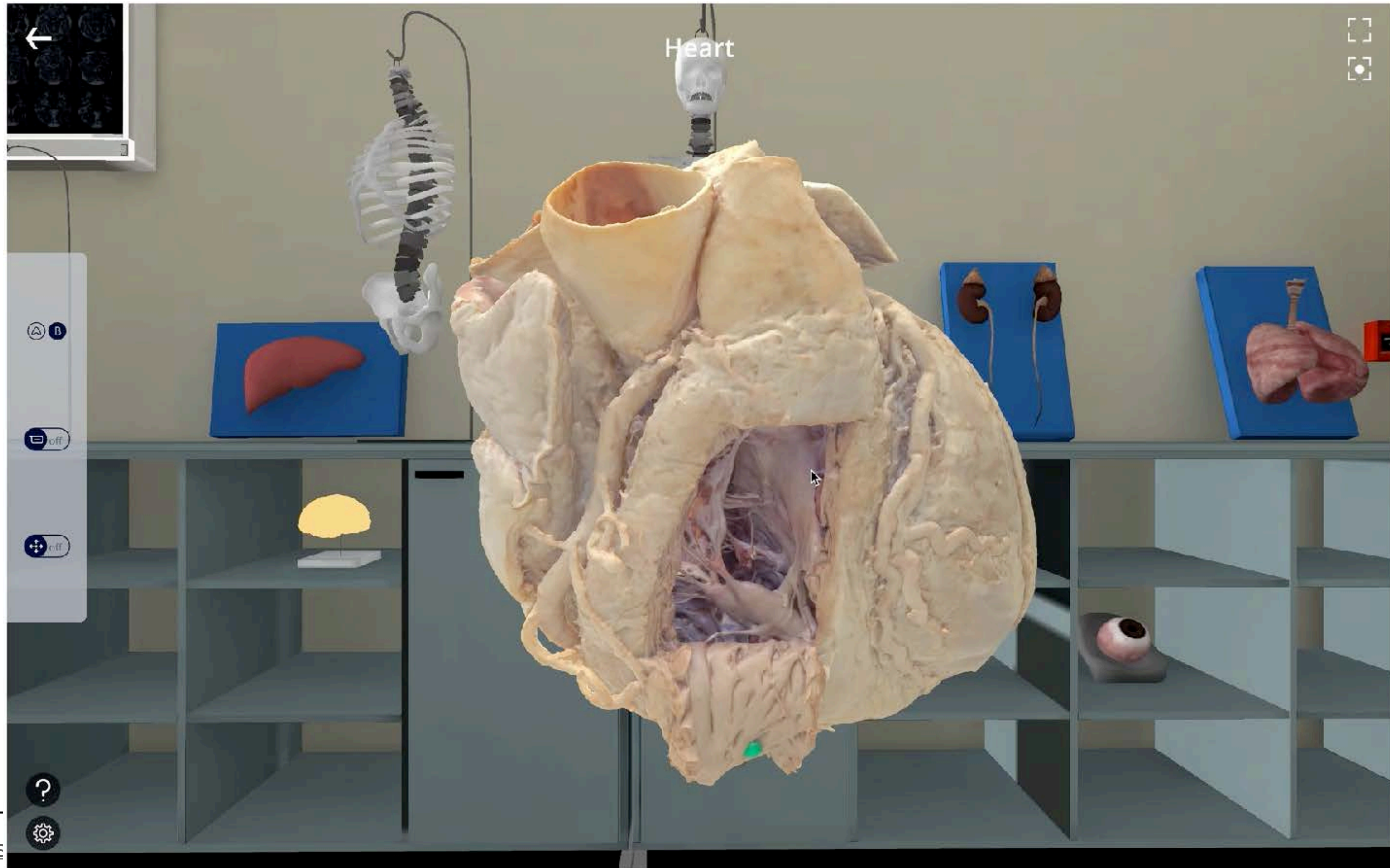


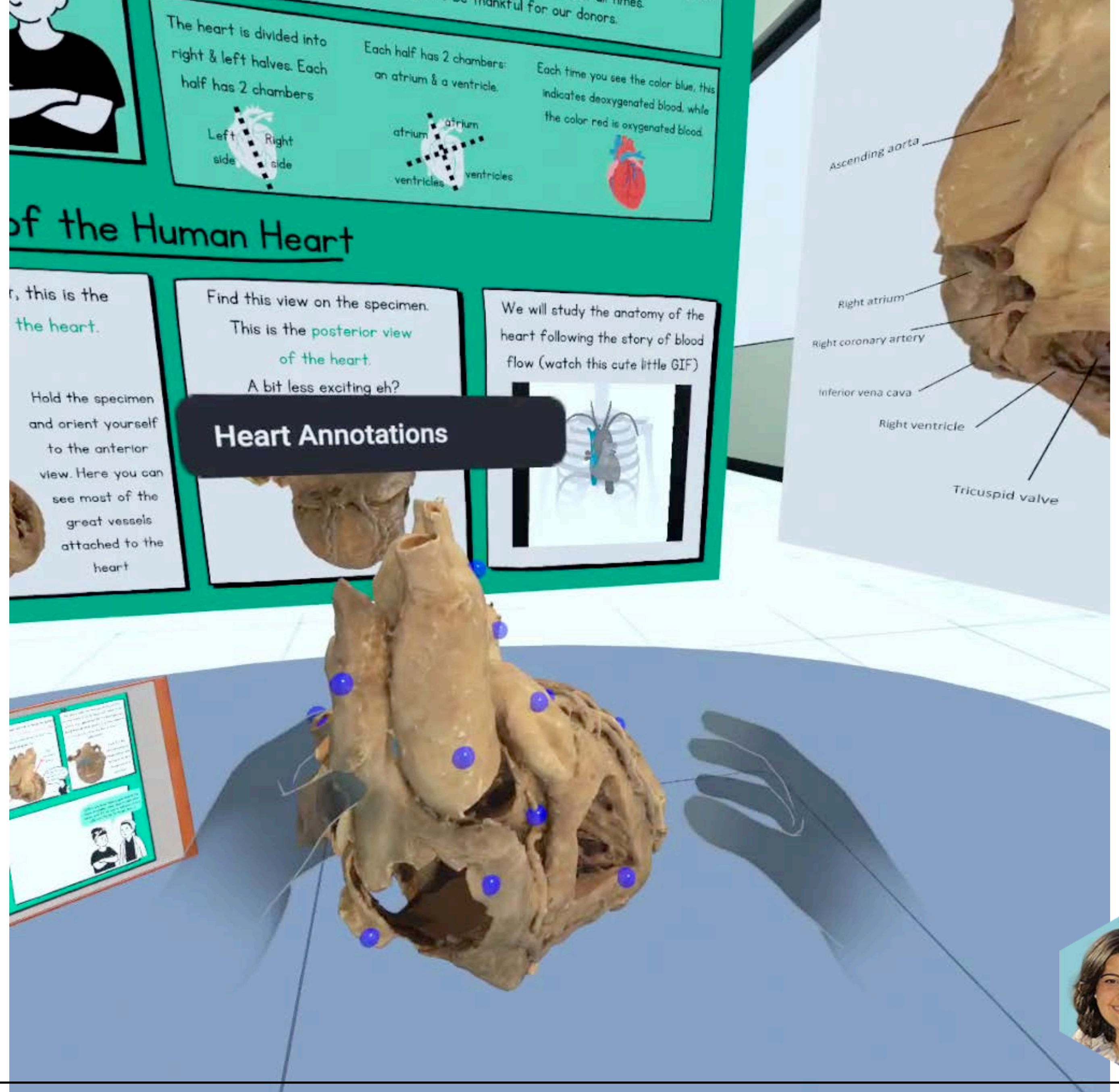
What about student agency?

- How can we integrate student exploration into a digital environment?
- Can we promote a sense of awe?
- Can students interact with the digital specimens?

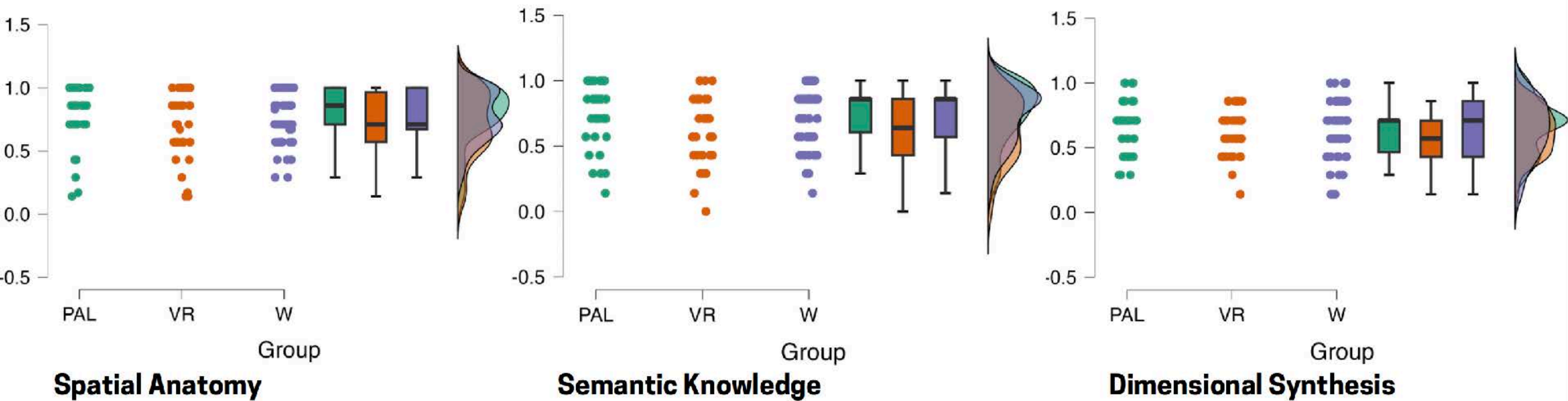


VanVR: The UBC Virtual Anatomy Lab





How did students learn in VR compared to traditional methods?



Learning

Knowledge outcomes are great and comparable between groups. Students are confident in the knowledge they learned.



Effective

The 3 lab designs are equally effective in teaching anatomy (based on the knowledge test performance)

Enjoyment

The students' experience is positive among the three modalities, however, the PAL and VR groups expressed higher levels of enjoyment



Teaching

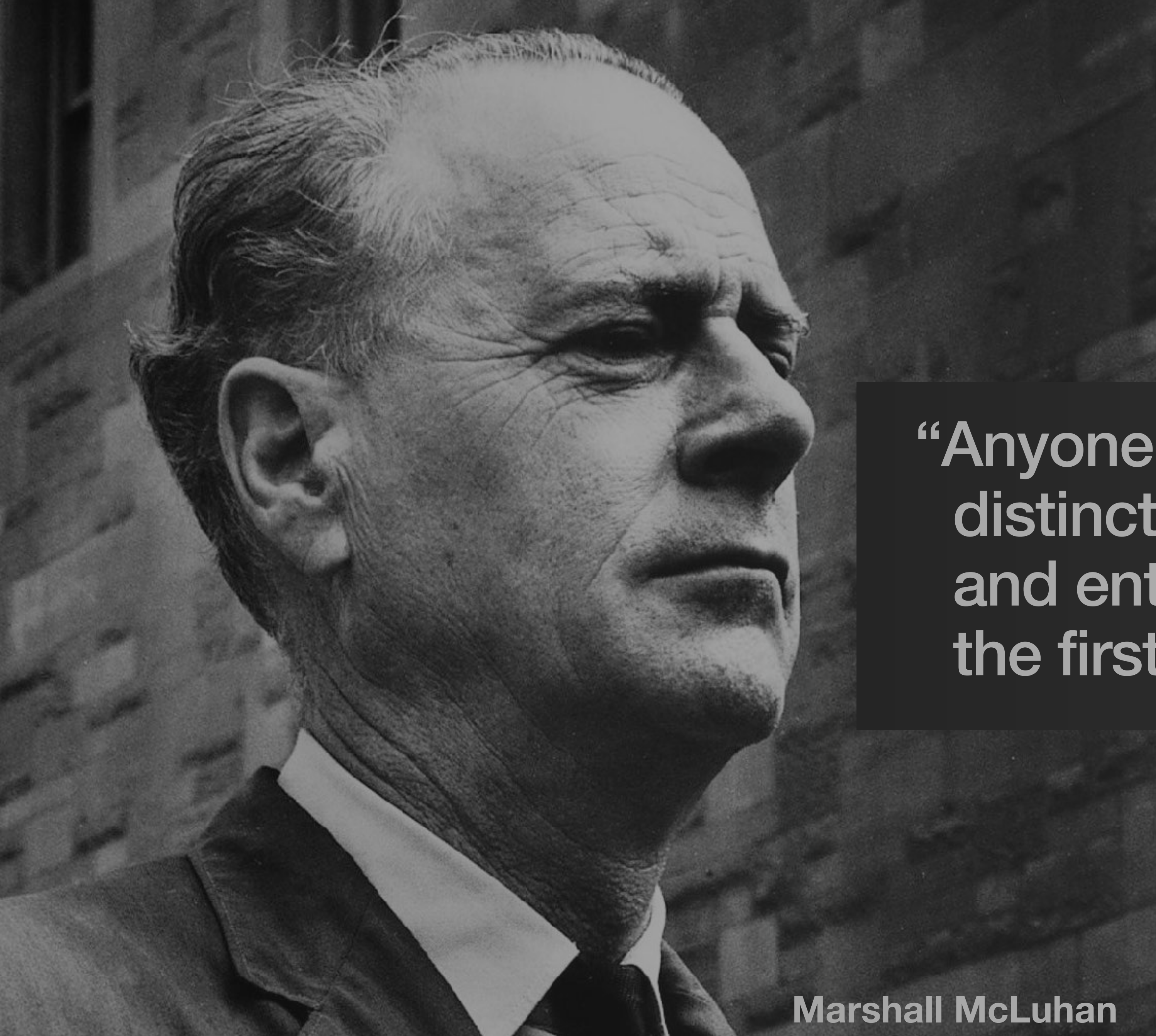
VR can be used in situations where learners do not have access to traditional anatomy teaching resources



What about our community of learners?

- Can we bring learners together in a virtual classroom?
- Can we integrate everything we've learned in media production into a high yield, live learning experience?
- Can education be fun?





“Anyone who tries to make a distinction between education and entertainment doesn’t know the first thing about either.”

Marshall McLuhan





THE UNIVERSITY
OF BRITISH COLUMBIA

**INTERUNIVERSITY
ANATOMY LAB**

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