REIMAGINING LEARNING EXPERIENCES WITH THE USE OF AI AND NEW TECHNOLOGIES

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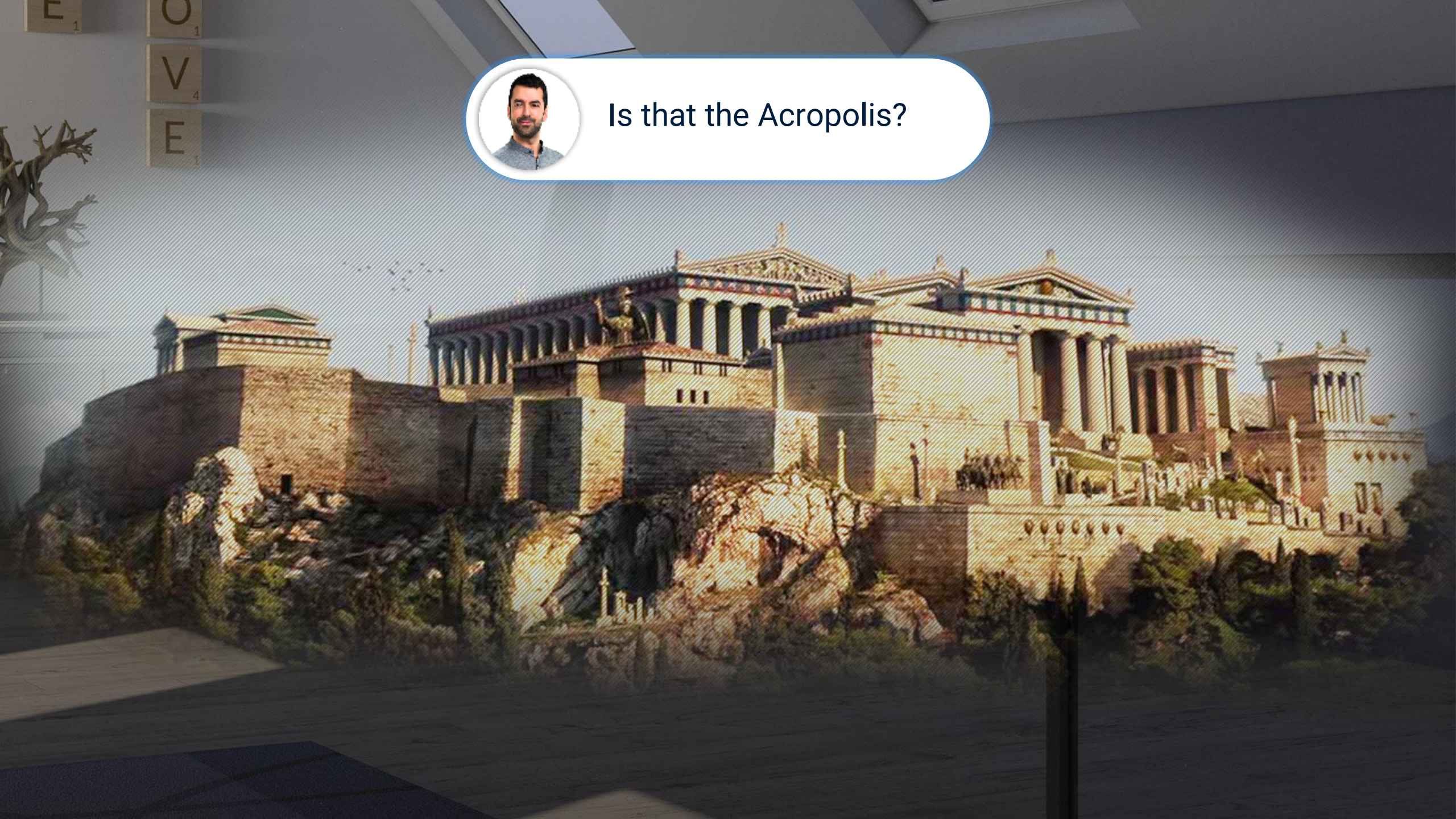
A LITTLE BACKGROUND

- ✓ My background includes work in corporate learning, professional development, and higher education; my company works primarily with organizations, and I also teach at Columbia University.
- ✓ My view of learning experience design using technology is holistic; it draws on work from education, cognitive science, computer science, motivational theory, and other areas including writing and creative uses of media.

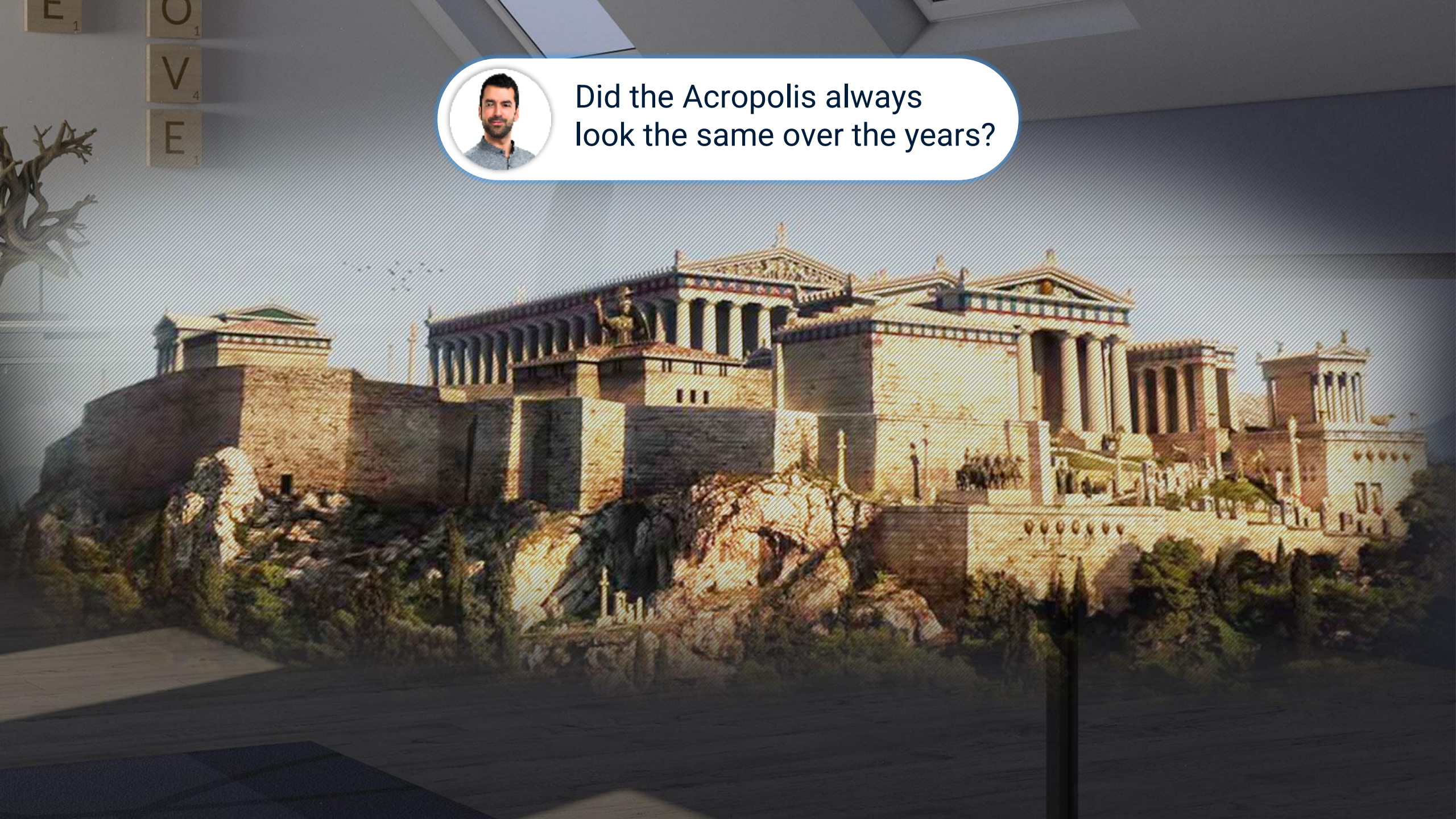
MORE BACKGROUND

- ✓ A lot of the work I've been involved with is for very large-scale audiences, so one goal is often to put people in a position to learn and succeed even when they don't have access to a teacher.
- ✓ Many of the self-paced online learning experiences that I've designed would be even stronger if they also included interactions with a teacher or instructor (but practical constraints prevented that from happening)

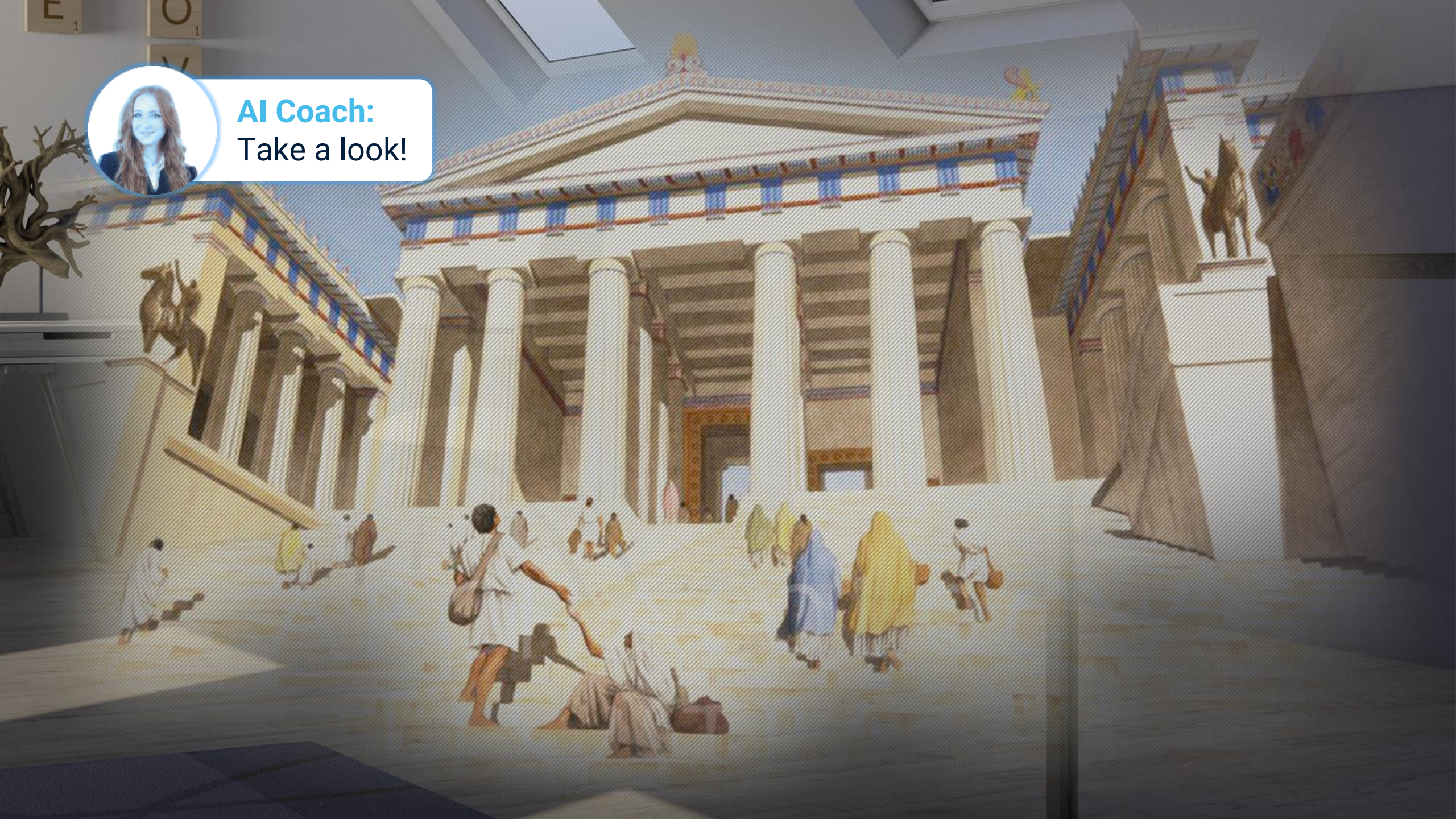
A POTENTIAL FUTURE LEARNING EXPERIENCE


Is that the Acropolis?

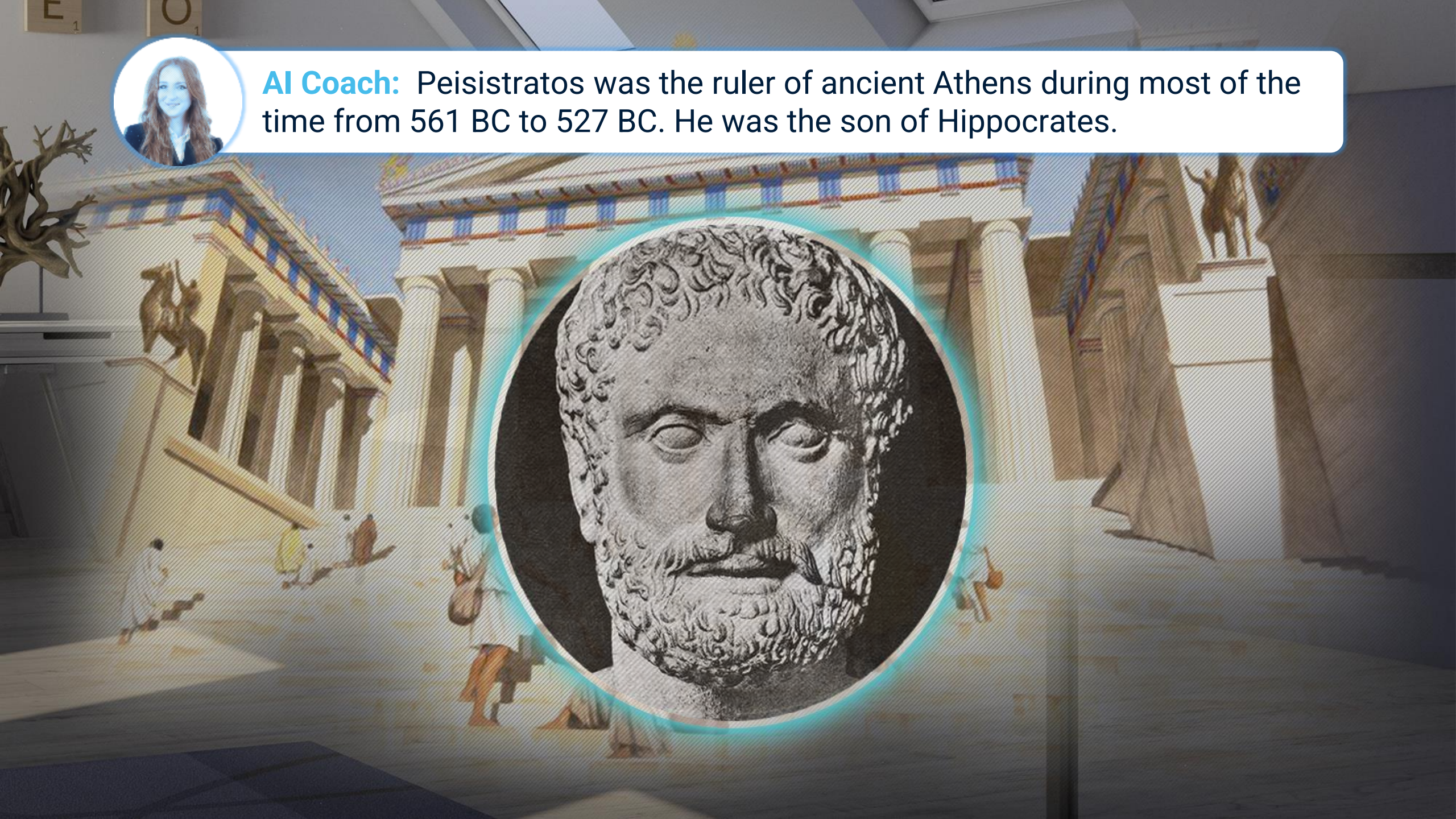
AI Coach: It is! There were actually a number of buildings known as an acropolis in ancient Greece. The word acropolis means “highest point.” But the Acropolis in Athens, which you recognized, is the famous one and is known as “The Acropolis.”


Did the Acropolis always look the same over the years?

AI Coach: We don’t know much about the architectural appearance of the Acropolis before the Archaic era, which started in the 8th century BC. One major addition was when Peisistratos built an entry gate, or Propylea.


AI Coach:
Take a look!

Who was Peisistratos?


AI Coach: Peisistratos was the ruler of ancient Athens during most of the time from 561 BC to 527 BC. He was the son of Hippocrates.

The Acropolis is so much bigger than I imagined!

LEAVING THE VIRTUAL WORLD AND VISITING GREECE TODAY...

Coordinates: 37°58'15"N 23°43'34"E
Location: Athens, Attica, Greece

KEY ELEMENTS OF THIS EXPERIENCE

- ✓ Experiential learning, in a (very!) realistic context
- ✓ Coaching guidance
- ✓ Feedback (from a coach and from peers; a teacher could also play a role here)
- ✓ Learner control, but the learner is assisted and advised
- ✓ The experience could also form a component of a discussion or other instructor-led activities
- ✓ An immersive, personalized experience—and we could add more learning by doing, too!

A POTENTIAL FUTURE TRAINING EXPERIENCE

EXIT
EXIT
BIGGER.
BETTER.
LANCÔME
FREE
GIFT
CUSTOMIZED
BY YOU

Hello!
Can I help you find anything?

AI Coach:
Make sure you smile and look friendly!

Hello!
Can I help you find anything?

Hello!
Can I help you find anything?
Customer: Yes! Do you have this in a size “small”?

Hello!
Can I help you find anything?
Customer: Yes! Do you have this in a size “small”?
I'm sure we do!
Let me check for you...

PERFORMANCE SUMMARY

AI Coach: You did great!
But you need to work a bit more on your facial expressions.

Wording: 95

Tone: 85

Facial Expressions: 60

Overall Customer Satisfaction: 70

KEY ELEMENTS OF THIS EXPERIENCE

- ✓ Experiential learning in a realistic context
- ✓ Learning by doing, resulting in skill transfer to the job
- ✓ Coaching guidance
- ✓ Feedback (from an AI coach and potentially from peers and/or an instructor)
- ✓ A realistic, performance-based assessment and evaluation
- ✓ Learner control, but the learner is also assisted and advised
- ✓ The experience could also form a component of a discussion or other instructor-led activities
- ✓ An immersive, personalized, experience

AI ELEMENTS IN THESE EXPERIENCES

- ✓ An AI coach interacting realistically – in audio and/or text – with the learner.
- ✓ Tracking learner performance in detail and providing intelligent analysis; this can be used in an adaptive way to determine future learning suggestions based on a nuanced view of past performance and also, potentially, for assessment and reporting.
- ✓ Incorporating learner preferences in several ways.

TOP LEARNING EXPERIENCES

"My best learning experience ever was when my sister taught me how to drive a car."

"My greatest learning experience was when I learned how to crochet from my aunt."

"My most meaningful learning experience was from childhood: I had a great soccer coach and great teammates."

EARLY EDUCATION AND TRAINING: APPRENTICESHIPS

Photo from Encyclopedia Britannica

ADVANTAGES OF THE APPRENTICESHIP MODEL

- ✓ This was a learning-by-doing approach: people would learn by ***practicing***.
- ✓ There was a coach—an experienced mentor.
- ✓ The learning process was ***personalized*** for the apprentice.
- ✓ Apprenticeships weren't just a one-time event; the apprentice often continued to work with, and consult with, the master.

WHY DON'T WE SEE MORE APPRENTICESHIPS TODAY?

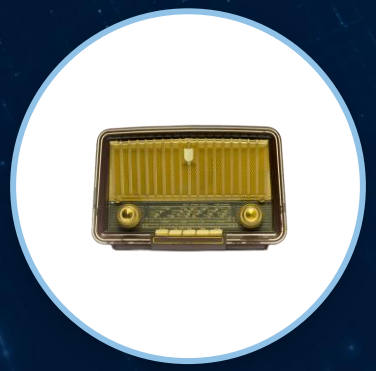
- ✓ Experts are too expensive and in too short supply for the large numbers of people we need to teach and train.
- ✓ This is a time-consuming model for the experts!

→ The model is still great, but it doesn't **scale up**.

Technology and AI enable us to create great learning experiences at scale.

A STORY ABOUT DESIGN

NEW TECHNOLOGIES, NEW METHODS OF INTERACTION



Radio

TV

VCR

Video Games

Computers

Smartphones/Tablets

VIRTUAL
REALITY
(VR)

AUGMENTED REALITY (AR)

Credit: Google

HOLOGRAMS

ARTIFICIAL INTELLIGENCE (AI)

AND MORE...

WHAT'S NEXT?

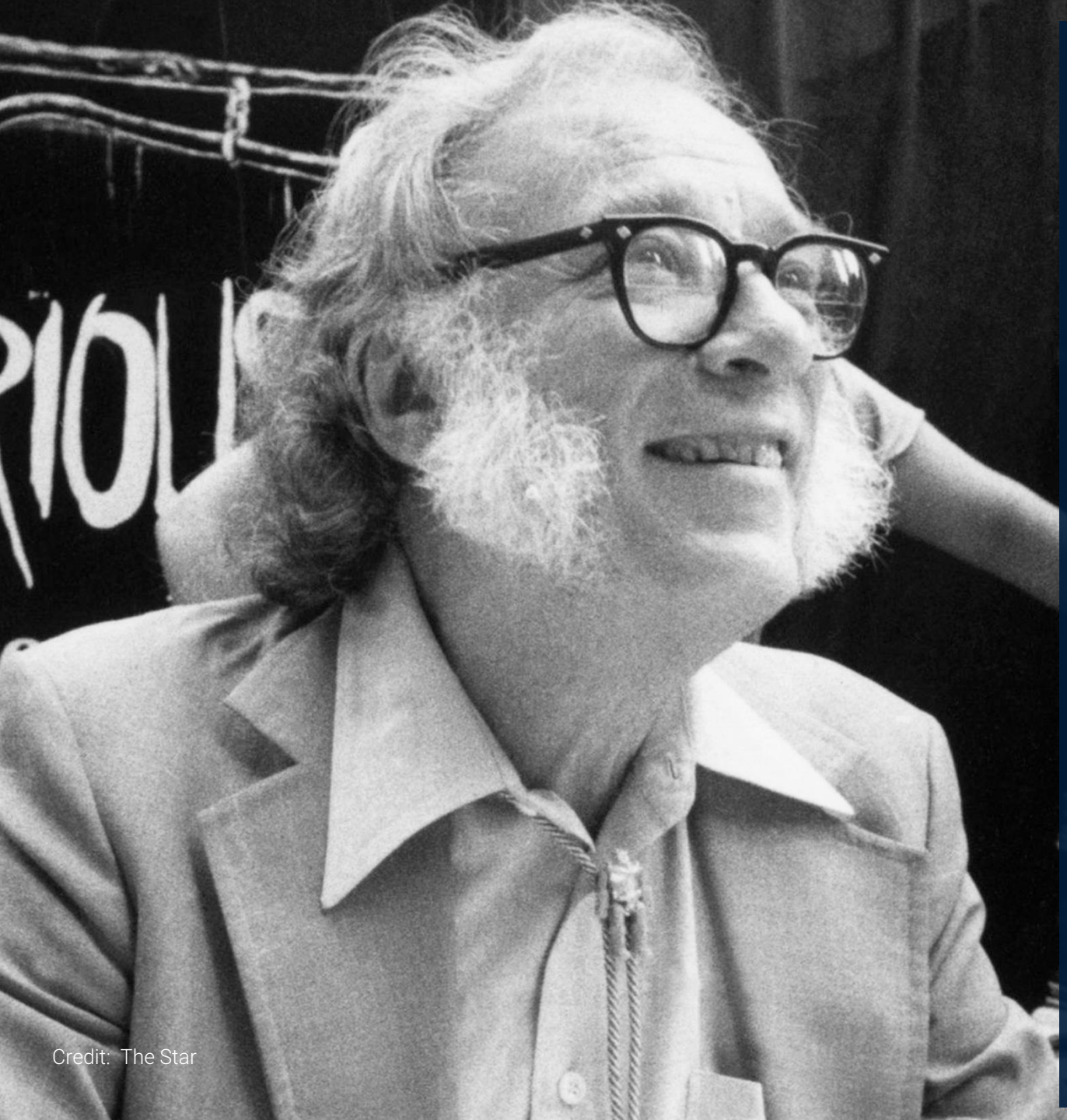
KEY THEMES

- ✓ Technology that feels warm and personal.
- ✓ Using AI and new technologies to help people learn in active, engaging, meaningful ways.
- ✓ Leveraging technology to maximize the role of professors/teachers/instructors as coaches and mentors.

AI AND NEW TECHNOLOGIES IN LEARNING

- ✓ We can use AI to help create more humanizing experiences if we design the right types of experiences.

- ✓ AI and new technologies can help us create individualized, engaging, relevant, respectful learning experiences that are scalable.



Credit: The Star

December 31, 1983
Isaac Asimov Predicts the World of 2019

"Education, which must be revolutionized in the new world, will be revolutionized by the very agency that requires the revolution — the computer….

There will be an opportunity finally for every youngster, and indeed, every person, to learn what he or she wants to learn. in his or her own time, at his or her own speed, in his or her own way….

Education will become fun because it will bubble up from within and not be forced in from without."

THANK YOU!

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The Learning Ideas Conference
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www.learningideasconf.org

My book, "*How Organizations Can Make the Most of Online Learning,*" is available now at Amazon at amzn.to/3ykuoMm
or just search for my name.