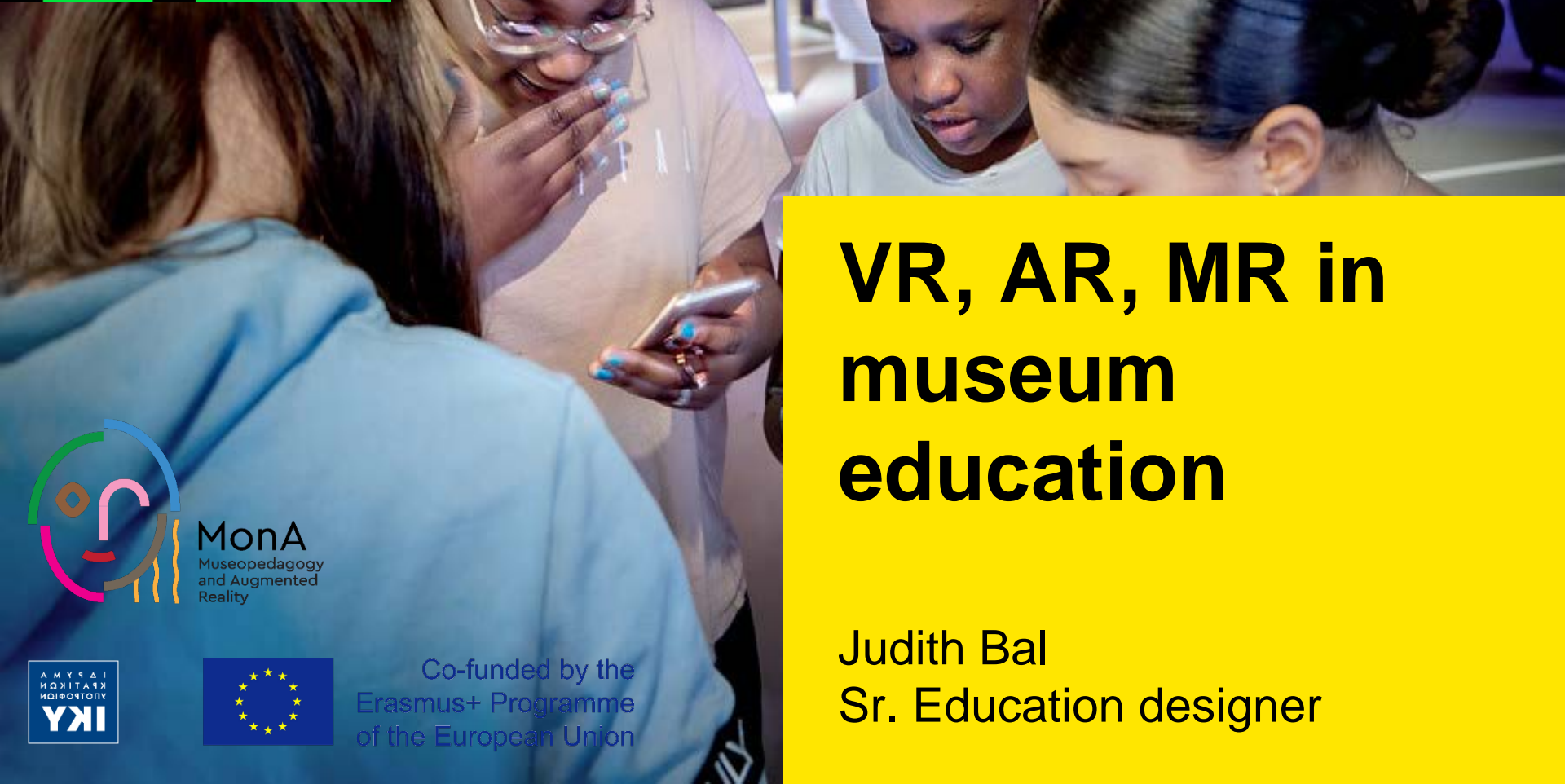# VR, AR, MR in museum education

Judith Bal
Sr. Education designer

MonA
Museopedagogy
and Augmented
Reality

MonA
Museopedagogy
and Augmented
Reality

- Museopedagogy and Augmented reality: Recognizing museums as educational spaces.

- 4 outputs:
  - A guide to museum education with the use of modern technology
  - An innovative virtual guided tour platform of the four partner museums
  - An interactive game with augmented and mixed reality technology
  - An application for smart devices combining the virtual guided tour and the interactive game

www.monaproject.eu

■ Examples

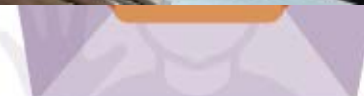London Natural History Museum

Rijksmuseum

Google Tour Creator

360° videos Youtube

■ Technology

- VR Goggles (High or low tech)

- Computer or phone

■ Uses:

- Experience inside a museum☐   immersion and interactive

- Virtual museum☐   Reach new audiences

Virtual Reality
and Museum education

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Reality

■ Benefits for learning:

• Active experience
• Helps understand complex problems.
• Can make invisible things visible
• Gamification

■ Downsides:

• Your closed off

• Personal experience

• Lack of flexibility

■ Museumeducation:

- High quality VR experiences are expensive

- Use ready made content in workshops

- Use easy programs to make your own.

  [Google Tour Creator](#)

Chatterfall

■ 1 minute to write down a question you

have

■ Send it if i say Go! :)

Augmented Reality -
Try it yourself

IN THE BROWSER (On your Phone or Tablet)

- ■ Go to Google and type: Tiger (In your native language.)
  - - Click on View in 3D
  - - Follow instructions

- ■ Go to Saatchi Art - View in your room.
  - - Go to: bit.ly/3cclsx2
  - - Click on artwork of choice
  - - Click on view in my room
  - - Follow instructions

DOWNLOAD APP:

- ■ Go to the appstore on your device and download Google expeditions.
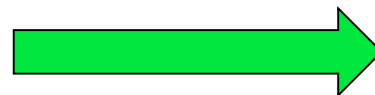
De tijger is een zoogdier dat tot de familie der katachtigen behoort, en een van de vier 'grote katten' die tot het geslacht Panthera behoren. Tijgers zijn jagende roofdieren. De meeste tijgers wonen in het bos en in grasland. Wikipedia

Wetenschappelijke naam: Panthera tigris

Bekijk een levensgrote Bengaalse tijge...

⬡ Weergeven in 3D

Levensduur: 8 – 10 jaar (In het wild)

Augmented reality
Examples

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Reality

■ Two examples
Art Gallery of Ontario (AGO)
Austrian national Library
Penguin Navi
The Loupe
Google expeditions

■ Technology
• Visitors own smartphone or tablet
   • Download app
• Loaner devices.
• WebAR

■ Uses
- Adding information
- Games / Treasure Hunt
- 'Guided' tours
- Wayfinding
- Seeing items up close (classroom)

Benefits for learning:

- Enrich content

- Increase engagement

- Provide interactivity

- Gamify learning environments

Downsides:

- Individual experience

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Reality

■ Museumeducation: (Same for VR)

- Use your own devices

- With a little intervention you can have a big impact.

- Gimmick or real value?

- Use ready made content in workshops:

  Google expeditions

Chatterfall

■ If you had all the money in the world what

would you develop for your

school/museum?

Mixed reality
Examples

MonA
Museopedagogy
and Augmented
Reality

■ Two examples

COSA
Musée de la Libération de Paris
Dynamic Anatomy Leiden University & LUMC

■ Technology
• Hololens, Magic leap or other device

■ Uses
• Use a hologram to put a virtual teacher in the space, guide or historical characters.

• Use MR technology as a standalone exhibit (for example in a game).

• Provide access to exhibits that you normally can't look close to or manipulate.

Mixed Reality
and education

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and Augmented
Reality

■ Benefits:

- Gesture-based outcome

- Interactive learning and immersion

- Feedback loops

- Fully immersive experience

■ Downsides:

- High costs

- Lack of flexibility

- Technical challenges

- VR, AR and MR are all really inspiring techniques with lots of possibilities.

- You need a lot of money to create a meaningful experience

- But there are ways to create inspiring AR and VR content at a low cost,

- …………..

Thanks!

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