

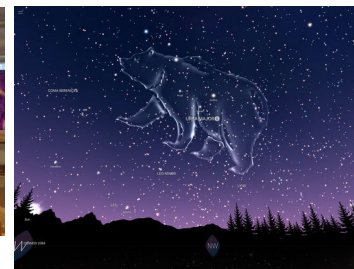
DLAB PROJECT OVERVIEW

Digital making + Change making

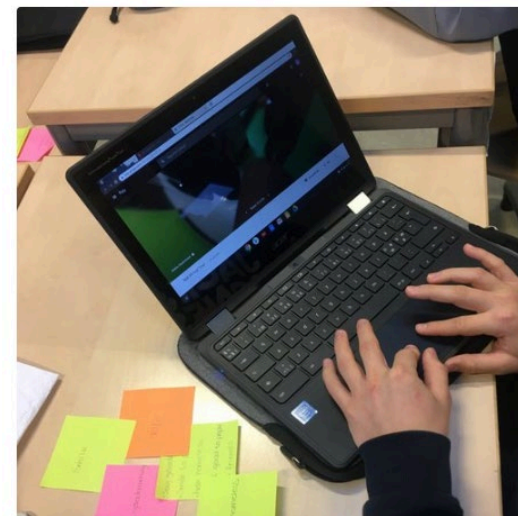
Over three years we adopt three types of 'learning across boundaries' challenges:

1. Crossing physical boundaries (what my body can do): learning through physical experiences (skills).
2. Crossing personal boundaries (my aspirations and confidence): learning through performance, public speaking, or gaining new skills (attitudes).
3. Crossing environmental boundaries (changes to where I am in space): learning taking place in unusual or different places (knowledge).

DLAB: GETTING TO KNOW EACH OTHER



Anna Kristine
@AnnaKristine2
Denmark is crossing physical boundaries by visiting NIA through 360 pictures! #dlabprojectday1

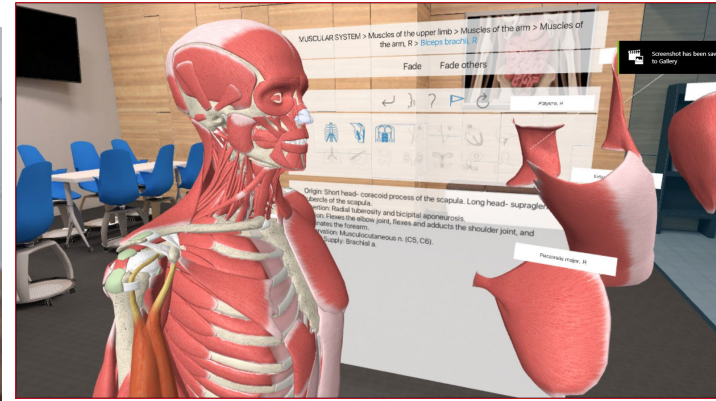
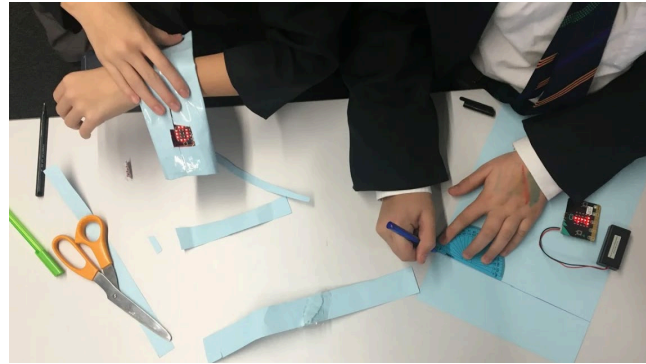


TECHNOLOGIES

Historium Brugge VR
Keynote AR animated GIFs + EyeJack
Google Earth VR
Sharing 360 images and videos
CoSpaces
Night Sky app
Roundme: making 360 virtual tours



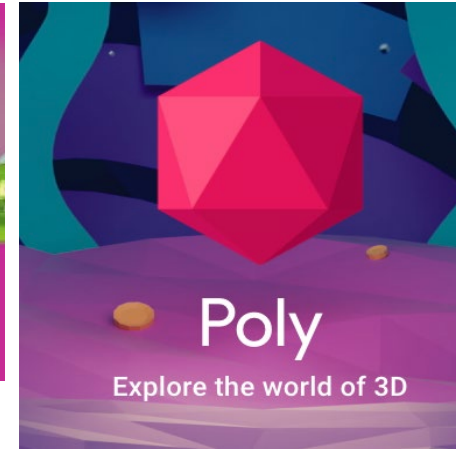
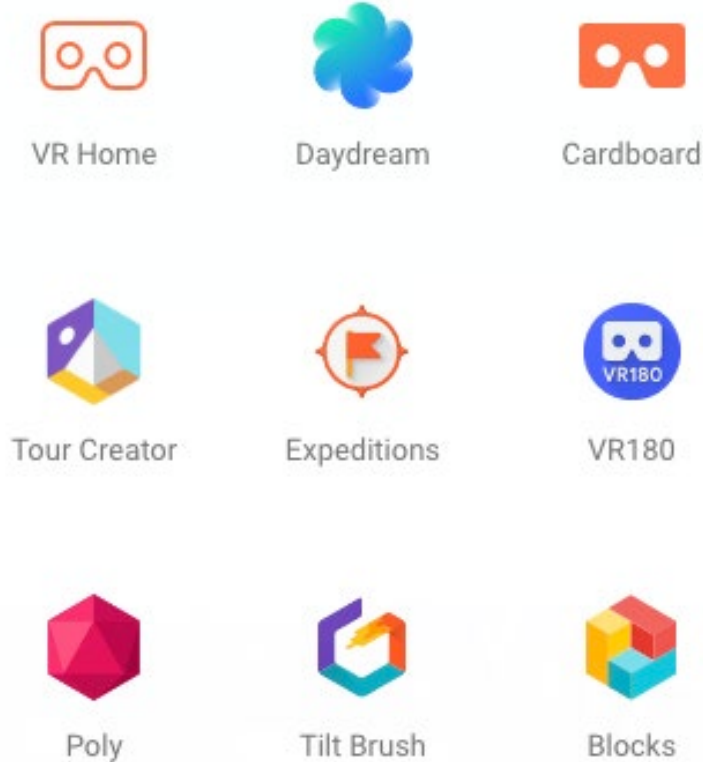
DLAB: EXERGAMING



TECHNOLOGIES
Underwater VR
3D Organon VR Anatomy
Sports Innovation Campus
Bruges
Virtuali-Tee by Curiscope
Plankpad app +VR
Scratch video sensing
Google Expeditions
Google Earth tours
Microbit fitbits
Makey Makeys + electric
fence wire
video sensing in Scratch
VR table tennis
Creating basketball
coaching videos in VR

<https://www.gophersport.com/blog/16-stem-in-the-gym-activities-with-makey-makey/9>

DLAB: DEVELOPING A SOLUTION



Crossing physical boundaries challenge:

Working with a partner country, design and make a prototype digital artefact that draws from artificial realities to stimulate physical activity and address the issue of young people's addiction to online games.

TECHNOLOGIES

Google tools:

- Google Earth VR
- Google Expeditions
- Tilt Brush
- Blocks
- Poly
- CoSpaces

https://uon1.padlet.org/helen_caldwell2/exergames

The Changemaker Movement seeks to build the skills and attributes for individuals to find innovative solutions to society's challenges.

<https://www.ashoka.org/en-gb>

DLAB: RESEARCH

The research associated with Year 1 of the DLAB2 project focuses on the use of immersive realities to blend physical and digital learning environments and provide opportunities for international collaboration.

It seeks evidence of the development of changemaker attributes and impact across our international team of c.200 school pupils, student teachers, teachers and lecturers as they pursue social innovation themes through a connected classrooms approach with their peers in Belgium, Denmark, Spain and Norway.

Data includes photo elicitations, reflective vlogs, TED-style talks, observations, tweets and interviews collected before, during and after participation in international days in schools.

QUESTIONS

How is changemaking demonstrated in practice by student teachers and pupils:

- Understanding the process of changemaking
- Evidence of changemaker development of attributes
- Evidence of empathy and intercultural awareness

DLAB: Y7 PUPIL REFLECTIONS

"Ah now you can exercise with technology and have fun"

"Just with a piece of tech you can facetime with a person on the other side of the world!"

"We're showing that children can help and can be the new generation to help the world advance and change people's mindset."

"I think we have done changemaking because it shows that we can also help make a difference by joining together physicality and technology."

"There's so much more to technology than just tapping games. It can motivate you to help with your health."

"It makes breaking boundaries more achievable. You don't have to do something extraordinary to make a difference."

"A changemaker is someone who is not afraid to voice their opinion about what is ethically right or wrong and make more people make a change"

"Being someone who had helped in some way would be a nice feeling"

"We can also help make a difference by joining together physicality and technology. We're showing that children can do it as well. "

"We're going to be the adults of the future and we need to incorporate (changemaking) into our lives now."

Five key takeaways



Implementation of AR/VR is patchy. Most organisations use it in only one or two departments and use AR more than VR.



There is appetite for further use of AR/VR, which is seen as an important and as yet untapped technology for the future. Health, creative arts, education, engineering and architecture are identified as key subjects for HE, and sciences, construction, hair and beauty, agriculture, arts and childcare for FE.



Responses to the technology are positive. Key benefits are the immersive, engaging learning experience and the opportunity for situated/experiential learning that is not otherwise possible. It inspires innovative approaches to teaching and improves learning outcomes.



The relative infancy of the technology means there are issues with implementation, cost being the biggest barrier. It is also difficult to scale when access to equipment is limited. Sector licenses and negotiated deals would be welcomed to help with this.



There needs to be a better understanding of how AR/VR can be used for education and its impact.

Organisations need advice and guidance about best practice and are keen to learn from peers and to develop communities of practice in order to embed the technology more widely. Case studies, facilitation of community and advice and guidance would help the sector with these issues.

JISC RESEARCH

AR and VR in learning and teaching

Survey findings October 2019

buff.ly/3okwdqr

DLAB: NEXT STEPS

Pursue the themes of using technology to cross personal boundaries in year 2 and environmental boundaries in year 3.

Create playful learning environments that encourage creativity, collaboration, innovation and entrepreneurship facilitated by technologies such as creative use of the 360 medium.

Enable all our participants to develop the confidence, values, beliefs and skills needed to become digitally literate changemakers.



OUTPUTS

A toolkit for sustaining social innovation education based on evidence from the project activities.

A framework for supporting international collaboration days with digital technologies.

A series of TED-style talks pitching collaborative projects and prototype solutions.

Open online courses based on innovative digital technologies such as artificial realities.