# Navigating Learning Worlds

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The Mind Lab by Unitec

# We Will Explore

- The various ways that teachers and learners can **navigate** different **learning worlds** with the support of **digital tools**
- How place, navigation and movement are recognised as important concepts in situated cognition and mobilities research
- The nature of pedagogy in technology-redefined activities that involve senses of both place and navigation

# Introduction
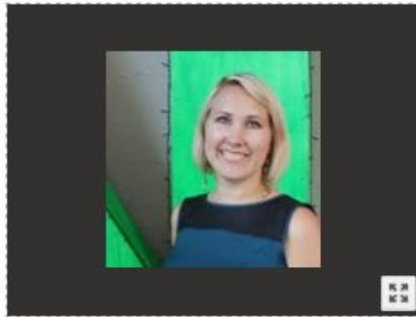
# Learning Worlds

- There have traditionally been two learning worlds, the **'real'** world and the **classroom**
- More recently, teachers have increasingly embraced the opportunities for further learning worlds, enabled or **enhanced by technology**
- The place of learning is no longer a single container but comprises multiplicities of **experience**
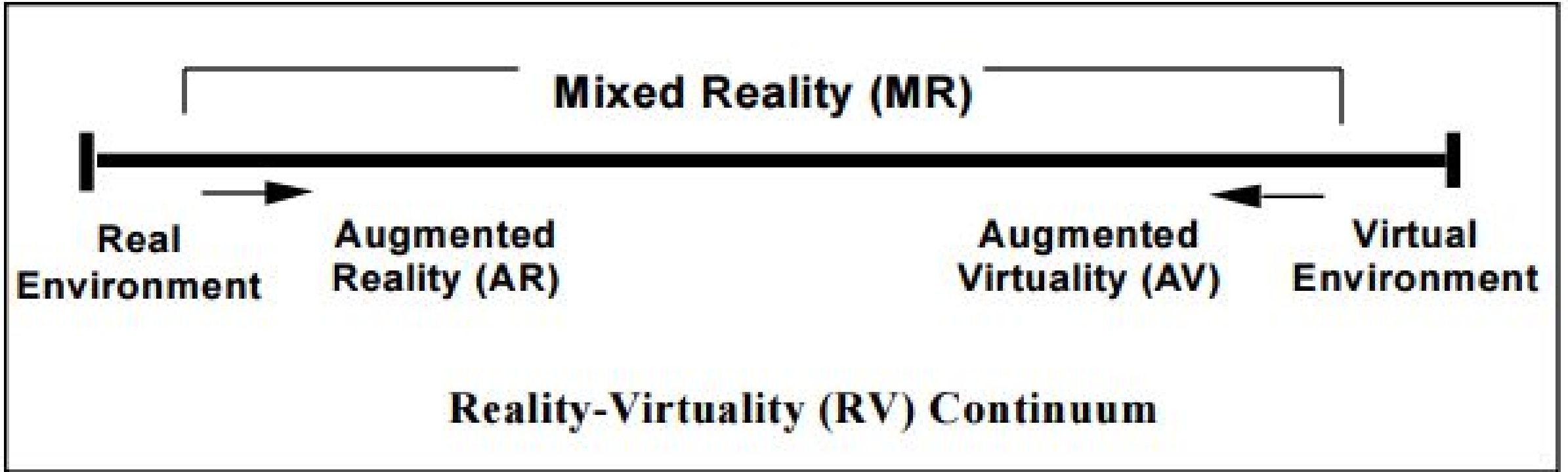
# Research Context

In-service postgraduate programme for **teachers** that enables them to transform their practice using digital and collaborative learning.

Some learning experiences take place in spaces beyond the classroom
- Outdoor environments
- Mixed Reality
- Recollected or imagined journeys

# The Reality Continuum



Milgram, P., Takemura, H., Utsumi,A. & Kishino, F. (1994). Augmented Reality: A class of displays on the reality-virtuality continuum. In *Proceedings SPIE 2351*, 282-292.

# Pedagogical Issues

- If **place** is important to human experiencing then how do we pedagogically consider place in digital learning activities?
- How important is it that these activities can be enacted in **real** places?

Innovation is sometimes easier in virtual or augmented environments than in purely physical ones.

# Method

- Relevant student posts were gathered from Google Plus online communities
- Many of the posts are collaborative
- We identified 37 posts that contained relevant insights
- Data was qualitatively analysed for ideas and themes related to:
  - outdoor navigation using location based tools
  - virtual navigation in immersive online spaces
  - augmented map based navigation.

# Tools Used

# Results - Action Bound

- Helping new students navigate their way around schools and identify important locations
- Buying food at specific locations (cultural context)
- Navigating through a culture walk
- Fostering hauora (well-being)
- Linking up with others at cafes for specific activities.
- Learning designs that are based on navigating 'real' spaces resonate strongly with the concept of situated cognition
- https://www.instagram.com/p/BRVAeZ5jj89/?taken-by=millainkila

# Results - Google Tour Builder

- Tourist itineraries that included learning activities such as calculating overall costs, a tour of architectural shapes, Rio Olympics (topical at the time) e.g. choice of team training locations,
- Mihimihi/Pepeha
- 'Amazing Race' style tours
- Earthquakes
- Gallipoli
- Haerenga (journey) of Maui through Aotearoa (New Zealand),
- Following in the footsteps of Sir Edmund Hillary
- Roald Dahl's Esio Trot
- Pokemon and biomes

# Results - Google Expeditions

- Students could more directly experience places around the world, rather than just looking at pictures
- Those that tried it out with their students or colleagues reported a very enthusiastic reaction
- Using this a precursor to a video call with a class overseas, a way of becoming familiar with the other students' context before meeting (virtually) with them
- Some teachers reflected that it was easier and more directly useful to implement AR in the classroom
- https://www.instagram.com/p/BSe3sTqjN3-/?taken-by=millainkila

# Data Analysis

In our analysis we noted three continua
● the continuum of physical accessibility and learning spaces,
● the continuum of extent of world knowledge
● the continuum of script and counter-script.
We will outline these on the following slides

# Physical Accessibility

In the continuum of physical accessibility, some learning activities are simple to host in a physical space, while others are difficult or impossible.

Locations easily
visited physically

Locations potentially
visited physically

Locations
physically inaccessible

School,
environs

Local or national
tours or areas

Overseas locations or events,
hostile environments

# The Extent of World Knowledge

The continuum of the extent of world knowledge is based on how much pre-existing knowledge the learner brings to a given learning world.

Sharing existing knowledge

Deeper learning about familiar contexts

Learning new knowledge
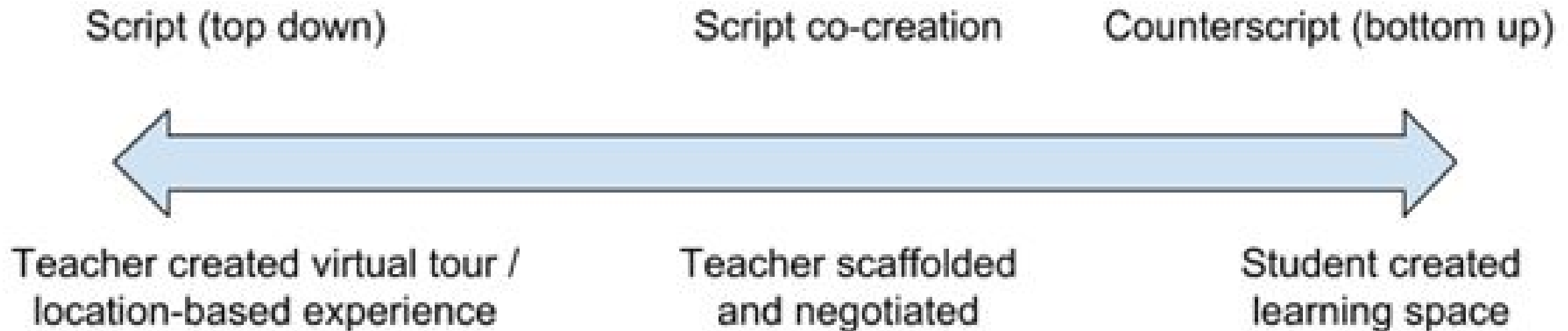
Sharing self-knowledge e.g. digital mihimihi

Exploring the local culture, history or geography

Experiencing entirely new learning worlds

# Scripts and Counter-scripts

The continuum of script and counter-script means to what extent material is generated by teachers or students, and the implications of using those sources



Script (top down)  Script co-creation  Counterscript (bottom up)

Teacher created virtual tour / location-based experience  Teacher scaffolded and negotiated  Student created learning space

# Conclusions

- Learning can be enacted in a real place, even if you are not there
- Activities often took place in familiar geographies, understanding a known context or a trigger for interpreting future experiences
- The digital component was essential to the experience in every case
- Pedagogies of place are potentially greatly enhanced by the appropriate integration of suitable tools that meet pedagogical aims and objectives

# Thank You!

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## 27 LOCATIONS

Whangarei
Auckland - North
Auckland - Central
Auckland - South
Orewa
Tauranga
Hamilton
Ruatoria
Rotorua
Taupo
Gisborne
Whakatane
Hawke's Bay
Whanganui

New Plymouth
Masterton
Wellington
Nelson
Blenheim
Greymouth
Christchurch
Timaru
Rolleston
Dunedin
Cromwell
Balclutha
Invercargill

### TIMES *

Evenings (4pm-8pm) and/ or
Saturday mornings (9am-1pm)
*varies between sites