Adapting and evolving the delivery of pedagogy for the 21C learner

ZOE TIMBRELL

Kaiwhakahaere

Pam Fergusson Charitable Trust

TĒNĀ KOUTOU KATOA

Ko Pirongia te maunga te rū nei taku ngākau	Pirongia is the mountain that speaks to my heart
Ko Waipa te awa e mahea nei aku māharahara	Waipa is the river that alleviates my worries
I tipu ake au ki Kirikiriroa	I grew up in Kirikiriroa
Nō Ireland ōku tīpuna	My ancestors are from Ireland
Ko Zoe Timbrell tōku ingoa	My name is Zoe Timbrell
Kō tēnei taku mihi ki ngā tāngata whenua o te rohe nei	I acknowledge the tāngata whenua of this area

Zoe Timbrell | She/Her
Kaiwhakahaere | Co Founder
OMGTech! | Pam Fergusson Charitable Trust
zoe@omgtech.co.nz

Nō reira tēnā koutou katoa.

TĒNĀ KOUTOU KATOA

Kei te noho ahau kei roto i te taumarumaru o Te Pane o Mataoho

I tipu mai ahau i ngā tahataha o te moana o Manukanuka o Hoturoa

Nō Mārehia ahau

Ko Tāmaki Makaurau te rohe

Kei Te Piriti o Māngere ahau e noho ana

Ko Vivian Chandra tōku ingoa

Kō tēnei taku mihi ki ngā tāngata whenua o te rohe nei

I sit in the shadow of Māngere Mountain

I grow better on the shores of Manukau Harbour

I am from Malaysia

I live in the area of Auckland

Specifically in Māngere Bridge

My name is Vivian Chandra

I acknowledge the tāngata whenua of this area

Viv Chandra | She/Her/ia
PLD Team Leader
OMGTech! | Pam Fergusson Charitable Trust
viv@omgtech.co.nz

Nō reira tēnā koutou katoa.

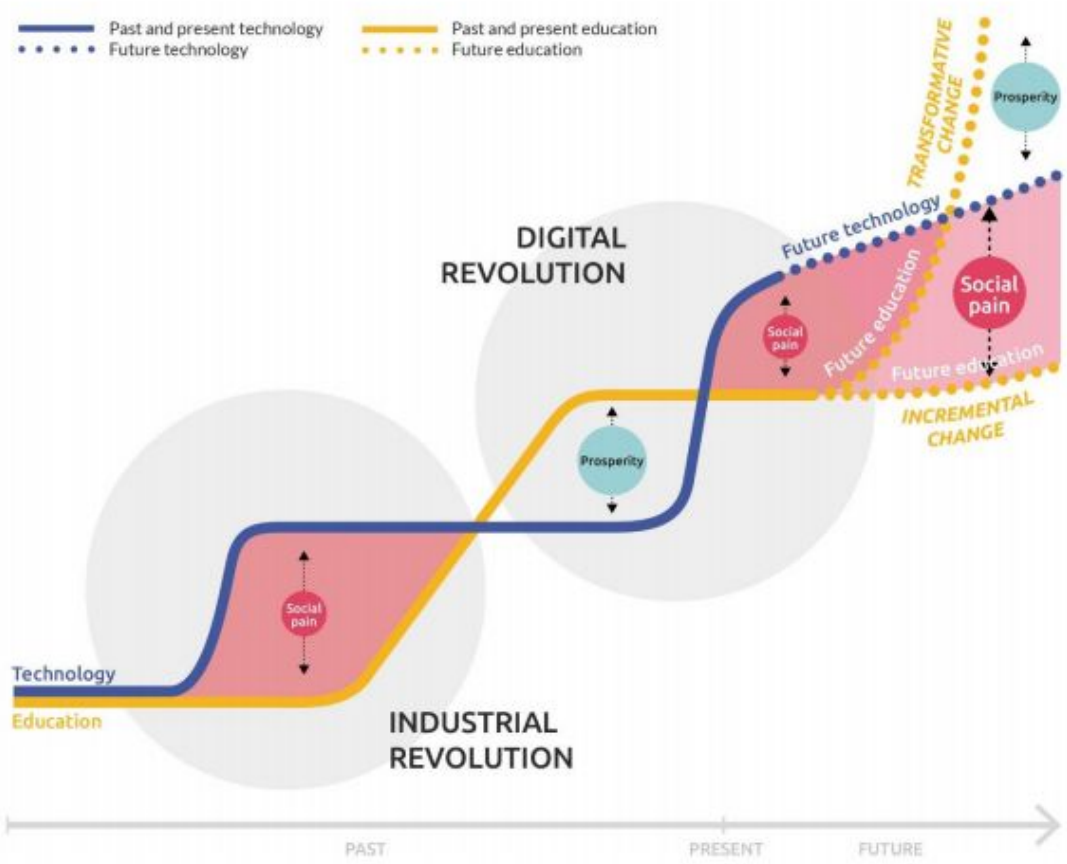
LEARNING INTENTIONS:

Adapting and evolving the delivery of pedagogy for the 21C learner

The opportunity for New Zealand schools to **innovate in their delivery of pedagogy to their students**

- ★ Understanding the extent of **the shift** that schools had to adopt during the lockdown
- ★ The **challenges faced** – what are the **solutions** to overcome these?
- ★ Next steps – how can schools going forward provide both a **flexible learning environment for students** as well as cater to those who prefer to follow a more t**raditional timetabled approach?**
- ★ Highlighting the advantages of **digital teaching**

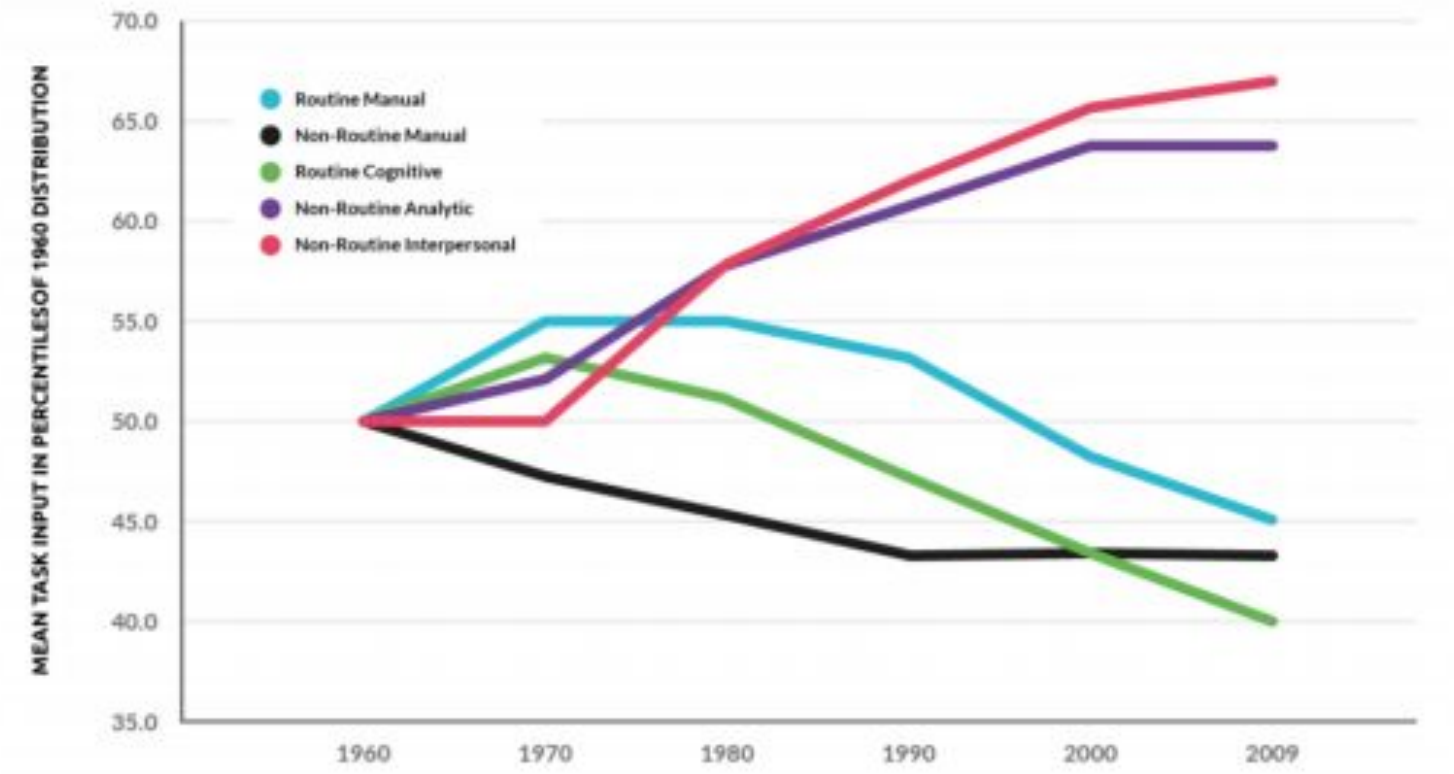
Figure 2. The race between technology and education



Source: Inspired by "The race between technology and education", Goldin and Katz (2010[2]).


Kami

Figure 3. Change since 1960 in prevalence of types of tasks required for work



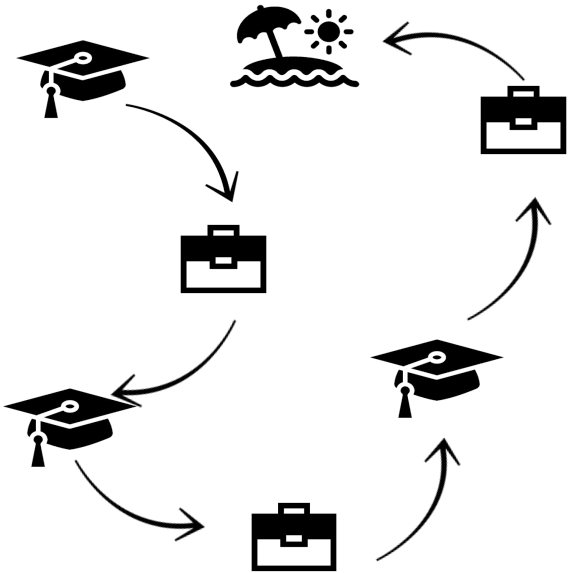
Note: This figure shows how the task composition performed by US workers has changed between 1960 and 2009.

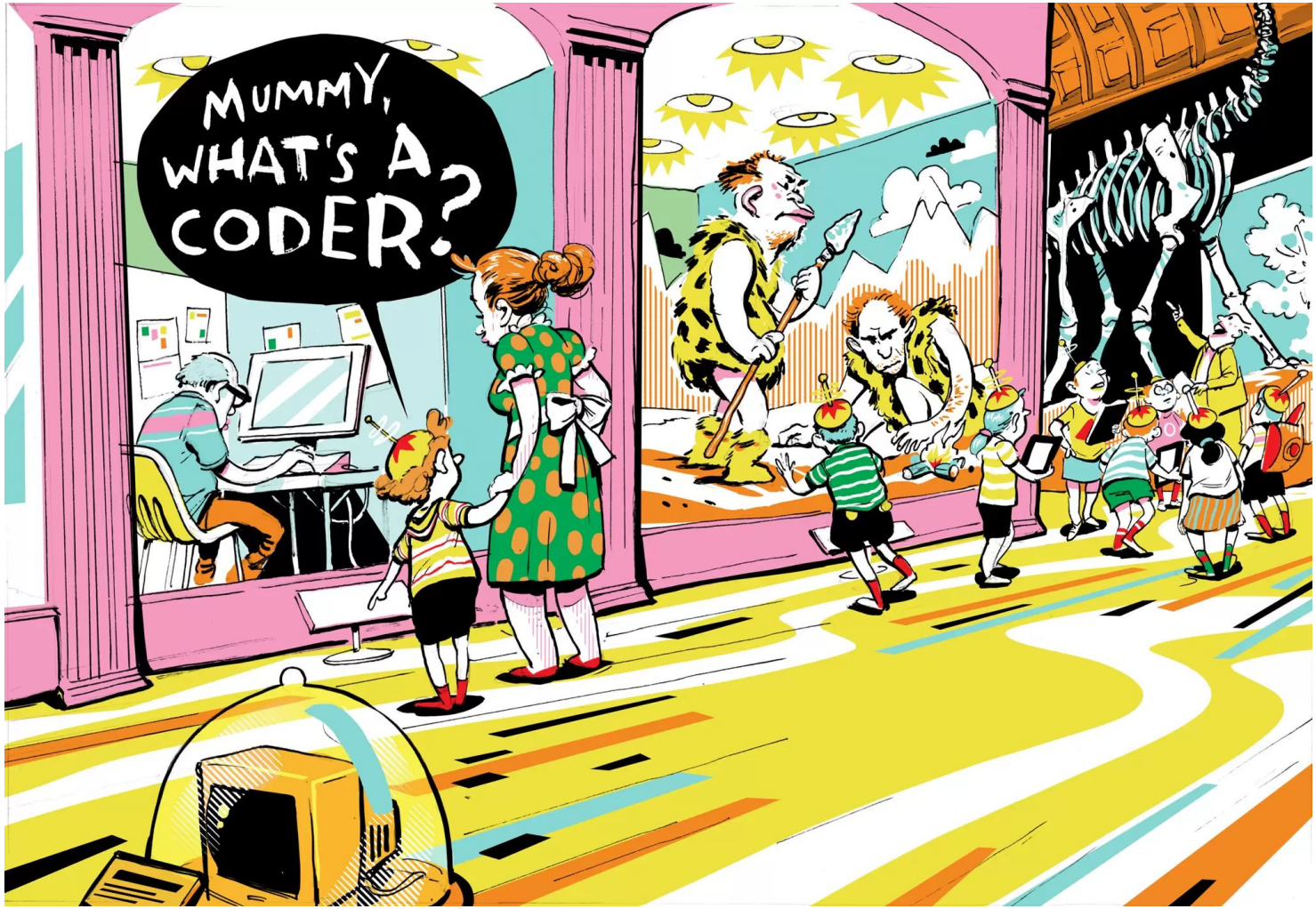
Source: Autor and Price (2013) in Bialik and Fadel (2018[7]), p.7.

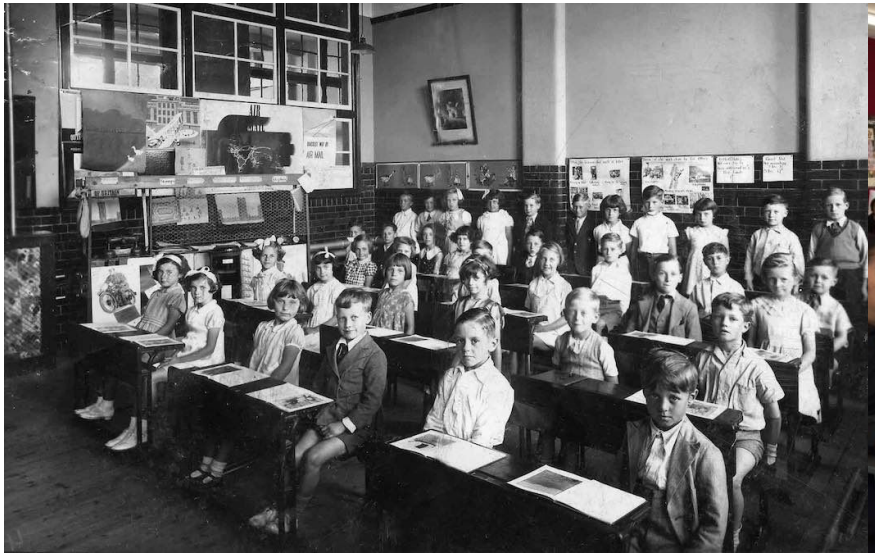

SPECIAL Newsweek EDITION
THE FOUNDING FATHERS OF
SILICON VALLEY
EXPLORING 60 YEARS
OF INNOVATION

OLD WORLD

NEW WORLD




MUMMY, WHAT'S A CODER?

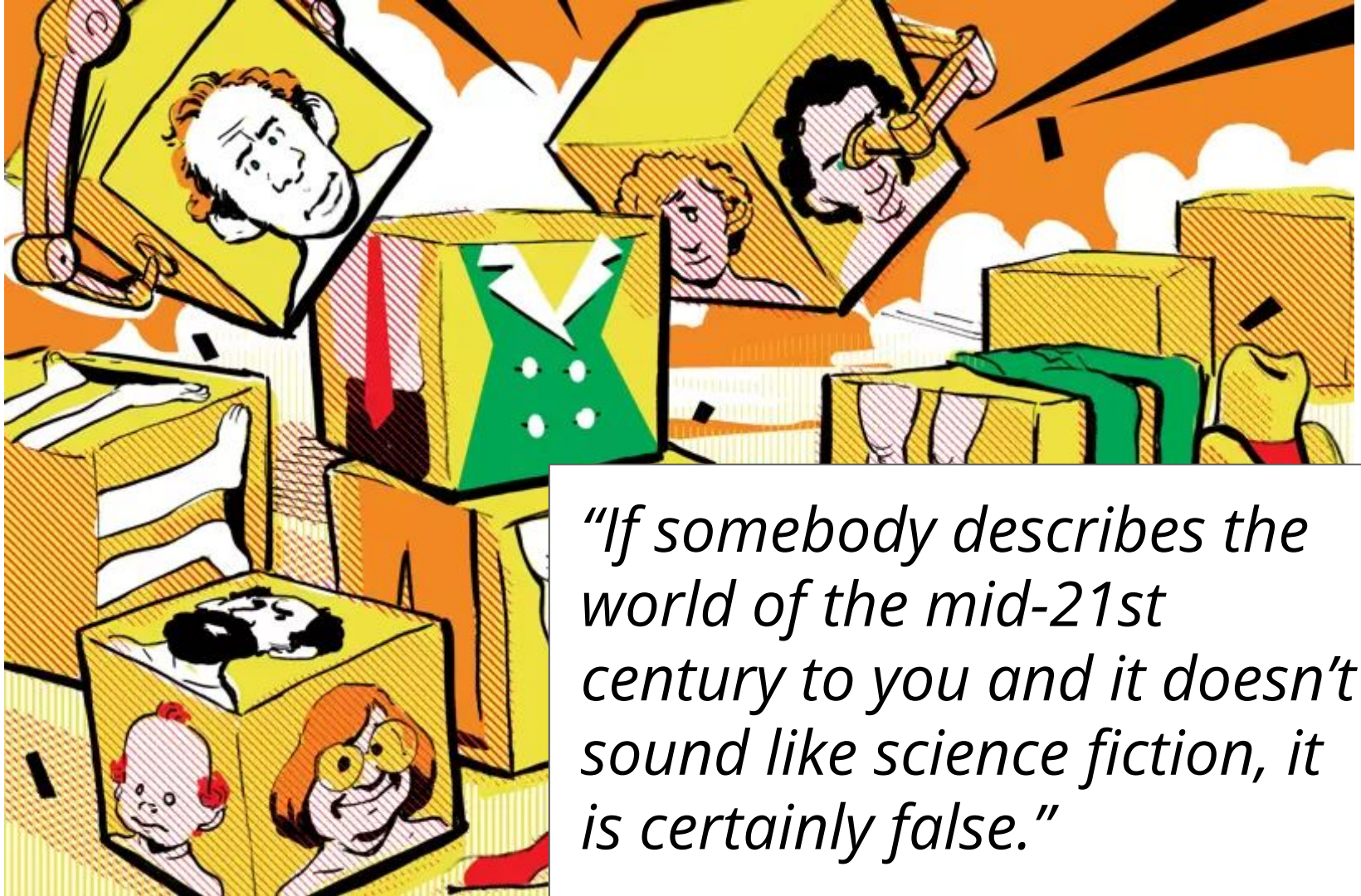



EXIT

Table 1. Comparison of society, industry and education across the 19th and 20th centuries, and the aspirational vision for the 21st century[1]

	19th century	20th century	Vision for 21st century
World events	Civil wars, racial segregation, colonialism and imperialism	World Wars I and II, independence of nation states, Cold War	Interdependence among national states, decentralisation of power, terrorist attacks, nationalism
Technological innovations	Electricity, telephone	Internet	Cyber physical technology (social media, AI, 3-D printing, robotics)
Main industry types and business climates	Oil industry, textile industry Mass production by machine Focus on profit making	Computers, electronics, financing Shift from manual to machines – automation Tailored production of goods and services for individual consumers Corporate social responsibility (CSR)	Social media, Internet of things, big data, digitalisation, post-truth (fake news) Shared economy, social entrepreneurship Consumers take part in the production of goods and services Focus on value making, sense making Corporate shift to creating shared value (CSV) and considering to contribute towards the U.N. Sustainable Development Goals (SDG)

	19th century	20th century	Vision for 21st century
Environmental stewardship	Humans conquer nature Humans own nature (in particular, land) besides labour, capital as key factors of production	Humans begin to realize the need to protect nature (environmental conservation/ protection) Focusing on human capital	Humans co-exist with nature; humans are part the mother nature Focus on sustainable development Support green growth Nature is considered as one of the important capitals – natural capital, human capital, cultural capital and social capital.
Changes in society/life	Improved standards of living and average income	Globalisation, baby boom, increased access to information	Accelerated migration, urbanisation, longer life expectancy, falling fertility rate, growing inequality, depletion of natural resources, climate change
Work organisation	Division of labour – e.g. Assembly in factories – assembly lines Hierarchical organisation	Transparency in organisation Organisation with delegation of responsibility and accountability	Transparency in organisation Organisation with delegation of responsibility and accountability as well as shared responsibility Flat organisation - Flat, open, flexible, transparent, and team-work oriented organisation
Work organisation in education and changes in compulsory schooling	Universal public schooling (primary and secondary education)	Emerging divergence of schooling (e.g. private, home schooling), Competition among schools	Emerging networks/partnerships of schools Emerging collaboration among schools Emerging collaboration between schools and communities at all levels, meta-, meso-, micro, capturing education system as part of a larger eco-system.
Curriculum	Prepare for labour market; education for jobs Academic disciplines only (mathematics, language) Static, linear and standardised	Prepare for independence; education for individual fulfilment Widened scope (added physical education, other domains); Still static, linear and standardised	Preparing for interdependence; education for citizenship Balanced scope (breadth and depth) Non-linear, dynamic, flexible curricula; focus on more personalised learning



“If somebody describes the world of the mid-21st century to you and it doesn’t sound like science fiction, it is certainly false.”

Rates of youth sulcide in New Zealand are among the highest in the world.

What would you do...

IF YOU WOKE UP TOMORROW AND SCHOOL AS WE KNOW IT WAS WIPED OUT?

WHAT WOULD YOU RECREATE?
WHAT WOULD YOU THROW AWAY?
WHAT NEW THINGS WOULD YOU WANT TO TRY?

Unite against COVID-19

LEARNING DELIVERY MODELS

“The danger that those with privilege and little idea of the realities of many of our young people, will be leading the development of virtual learning and rolling this out into our schools and communities, scares me and should scare all of us.

“I heard the host describe the wide range of solutions schools are struggling to implement as us **having all these jig saw pieces, but suddenly this pandemic has removed the picture from the box.** That’s a really apt analogy, but even when we thought we did have the ‘picture’ in our learning environments prior to COVID-19, the truth is that many children—Māori, indigenous, and minoritised children world-wide were always absent from that picture and their pieces never did fit.”

https://www.annmilne.co.nz/blog/2020/4/3/colouring-in-your-virtual-white-spaces

ANN MILNE EDUCATION

OECD Learning Compass 2030

The 3 principles of accelerating digital Learning

BLENDED LEARNING

PERSONALIZED LEARNING

COMMUNITY

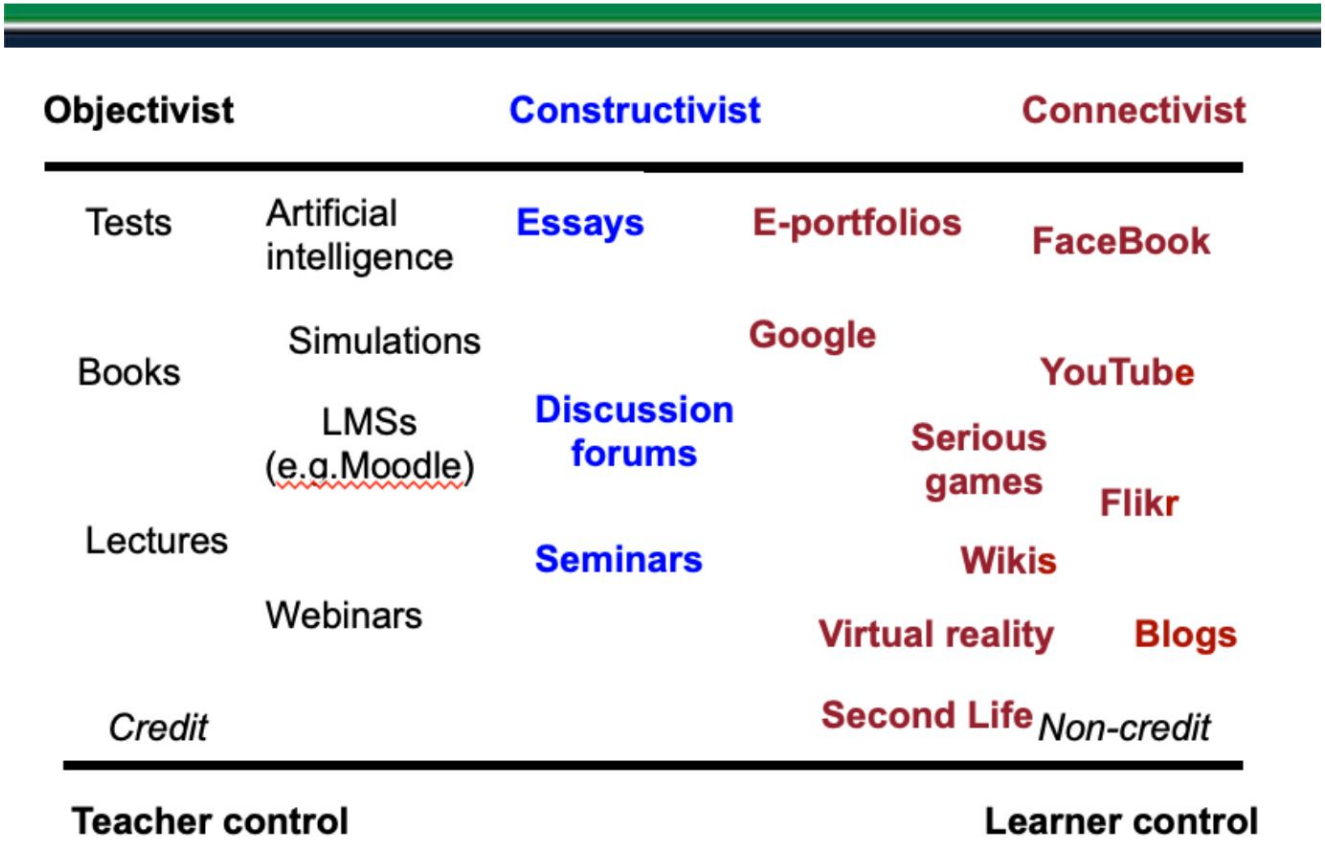
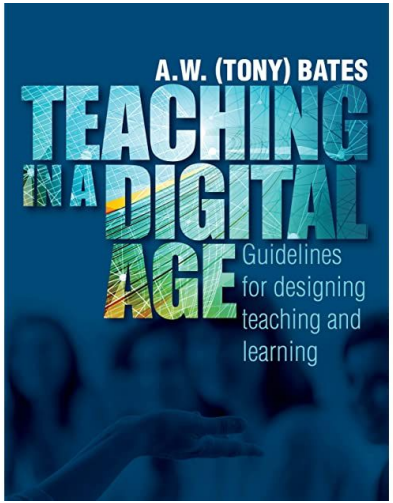


Figure 8.8.1 Analysis of different media by pedagogical criteria (adapted from Bates, 2011)



TEACHING IN A DIGITAL AGE – SECOND EDITION

https://pressbooks.bccampus.ca/teachinginadigitalagev2/ - Read for free particularly chapter 8

OMGTech! gives any primary, intermediate and secondary schools in NZ the opportunity to take part in its award winning workshops and PLD to be inspired and learn how to use future technology.

The Mana Tangata Tech Leadership programme selects students from around Aotearoa NZ that are not well represented in tech and pairs them with an awesome tech industry mentor.

e-Pou empowers Maori communities to be in charge of their own destinies with technology, and to give them equitable access to knowledge and resources while they build this vision.

The IGD Project aims to develop digitally confident rangatahi Māori and Pacifica through game design focusing on an indigenous lens.

The Institute of Awesome is an enviro-tech education centre set on 100 acres of native bush, in Whale Bay, Raglan - Bring your camp here!

Voluntari.ly is an online app that connects schools with corporate volunteers and short STEAM course content.

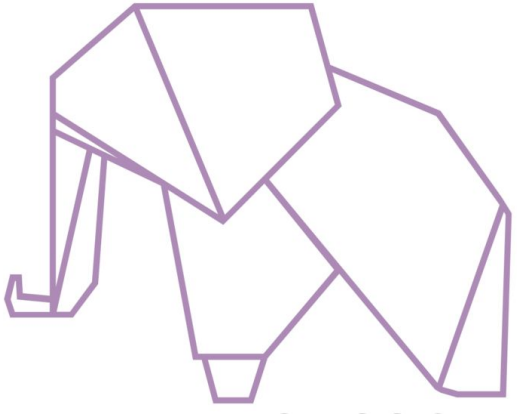
KŌRERO MAI! CONTACT US!

ZOE TIMBRELL
KAIWHAKAHAERE
ZOE@PAMFERGUSSON.ORG.NZ

VIVIAN CHANDRA
PLD TEAM LEADER
VIV@PAMFERGUSSON.ORG.NZ

FIND ALL OUR FREE RESOURCES ON
https://omgtech.co.nz/kaiako-wharenui
SIGN UP FOR FREE!

WHO ARE WE?



We're a charity that teaches kids to innovate with technology