



# Technology for Technology's Sake

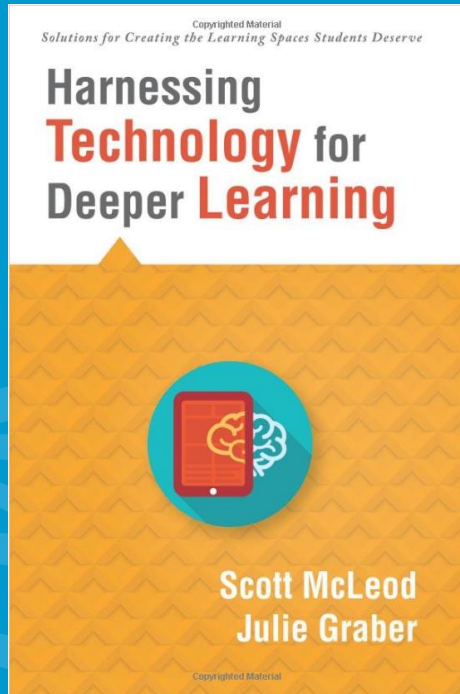
Harnessing Technology for Deeper Learning

presentation by Cam Swainson-Whaanga (Afed Ltd.)

# Summary

- Framing the challenge
- Seeking a new approach
- Limitations of current frameworks
- Introducing 4 shifts protocol

# Harnessing Technology for Deeper Learning



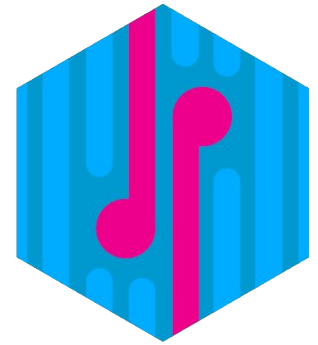
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<http://dangerouslyirrelevant.org/>

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# Framing the challenge



whakatōhenehene  
**DISRUPTION**

- Oversold and Underused : Technology in the classroom
- Many schools struggle with technology integration
- They believe they need to utilise digital devices
- They have invested in digital tools they feel are necessary to help students into the 21st century
- Many are not utilising their digital purchases
- Their digital technologies are not transforming the learning experiences
- Some are analogue classroom lessons but with more expensive digital devices
- Concerns about negative impact of technology on our thinking
- Figure out how to use these digital tools and use them well
- Using new frameworks for classroom technology integration
- Use digital tools to do things they couldn't do in an analogue learning space

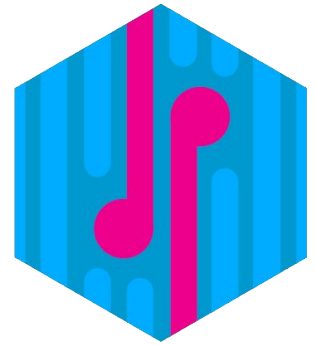
# Seeking a new approach



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INNOVATION

- Current frameworks
  - TPACK (Technological Pedagogical Content Knowledge) Universities
  - SAMR (Substitution Augmentation Modification **Redefinition**)
    - move beyond substitution toward redefinition
  - RAT (Replacement **Amplification** **Transformation**)
    - move beyond replacement toward transformation
- Technology usage should be
  - Active - actively using technology as a tool, rather than passively receiving information from it
  - Collaborative - technology allows collaboration rather than working individually
  - Constructive - connect new information with prior knowledge rather than passively receiving (discovery verse delivery)
  - Authentic - learning activities beyond instructional context ( handouts about green peace and rainbow warrior vs online research)
  - Goal directed - use technology to set goals, plan activities, monitor progress, evaluate results rather than completing assignments without reflection (using google docs only, without expanding to all the google tools, or emailing a shared link vs central doc with all links)

# Limitations of current frameworks



Difficulty in implementing these frameworks in practise, they are useful mental models, but they don't help educators know, what to do differently.

Example - an observer says “the lesson you just facilitated is at the augmentation level, you should try and move it toward redefinition” the current frameworks, do not help the educator to know what to change instructionally. (SAMR/TPACK/RAT usage continuum only, not learning continuum)

whakatōhenehene  
**DISRUPTION**

Current frameworks make teachers feel inferior, if they are not always at the transformational level.

Experts, evaluators and observers use the frameworks to highlight technology instructional level on those frameworks but don't give guidance on how to progress towards transformation.

Teachers can feel frustrated and defeated as they struggle to find meaning and make sense of the frameworks and improve their practises. (to vague and to general)

# Technology integration levels



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**INNOVATION**

Teachers can be at different levels of technology integration

- Entry
- Adoption
- Adaptation
- Infusion
- Transformation

The matrices help teachers understand that their technology integration for a given activity may be strong in one area (e.g. active technology use) while simultaneously low in another (e.g. authentic technology use)

# Introducing 4 Shifts Protocol



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**INNOVATION**

- new discussion protocol
- classroom observation template
- conversation tool
- assessment tool of technology integration for higher-order-thinking skills
- 4 Shifts Protocol - a different and hands on approach

The protocol attempts to get some specific, concrete look-fors and think-about's that can help teachers contemplate what instructional changes they might make in their units, lessons, or activities.

1. Deeper thinking and learning
2. Authentic work
3. Student Agency and personalisation
4. Technology infusion



# 4 Shifts Protocol Checklist

## Deeper thinking and learning

(moving from lower-level thinking tasks to activities greater in cognitive complexity)

**Domain knowledge** (discipline specific, relevant knowledge, skills and dispositions)

YES

NO

SOMEWHAT

**Deeper Learning** (big important themes rather than isolated topics or trivia)

YES

NO

SOMEWHAT

**Deeper Learning** (is the activity/assessment beyond low-level facts)

YES

NO

SOMEWHAT

**Deeper Learning** (are the students regurgitating syntheses provided by a source/teacher )

YES

NO

SOMEWHAT

# 4 Shifts Protocol Checklist

Deeper thinking and learning

**Critical Thinking** (activity engage deep critical thinking and analysis)

YES

NO

SOMEWHAT

**Problem Solving** (activity engage in complex and messy (not simple) problem solving)

YES

NO

SOMEWHAT

**Creativity** (allow students to design, create, add value that is unique to them)

YES

NO

SOMEWHAT

**Metacognition** (can students reflect on their planning, thinking, work and progress )

YES

NO

SOMEWHAT

**Assessment Alignment** (Assessments aligned to the cognitive complexity asked of students )

YES

NO

SOMEWHAT

# 4 Shifts Protocol Checklist

## Authentic Work

(move from isolated academic work to contributing to local communities)

**Real or Fake** (is the activity/work authentic and reflective of experts in the real world)

YES

NO

SOMEWHAT

**Authentic Role** (authentic societal role as part of their learning)

YES

NO

SOMEWHAT

**Domain Practises** (Are students utilising authentic, discipline specific practises/processes)

YES

NO

SOMEWHAT

# 4 Shifts Protocol Checklist

## Authentic Work

**Domain Technologies** (Are students utilising authentic, discipline specific tools/technologies)

YES

NO

SOMEWHAT

**Research and Information Literacy Strategies** (research/inquiry/information literacy strategies)

YES

NO

SOMEWHAT

**Authentic Assessment** (real-world products/performances for real world audiences)

YES

NO

SOMEWHAT

**Contribution** (is the students work contributing to the real world)

YES

NO

SOMEWHAT

**Assessment Technology** (is technology being used to assess)

YES

NO

SOMEWHAT

# 4 Shifts Protocol Checklist

## Student Agency and Personalisation

(move from teacher controlled learning environments to greater student agency)

**Learning Goals** (who selected what is being learned)

STUDENTS

TEACHERS

BOTH

**Learning Activity** (who selected how it is being learned)

STUDENTS

TEACHERS

BOTH

**Assessment of Learning** (who selected demonstration method/how will it be assessed)

STUDENTS

TEACHERS

BOTH

# 4 Shifts Protocol Checklist

## Student Agency and Personalisation

**Talk Time** (who is doing most of the talking)

STUDENTS

TEACHERS

BOTH

**Work Time** (who is deciding the work time and ensuring progress)

STUDENTS

TEACHERS

BOTH

**Interest-Based** (Is student work reflective of their interests or passions)

YES

NO

SOMEWHAT

**Initiative** (Do students have the opportunity to go beyond the given parameters)

YES

NO

SOMEWHAT

# 4 Shifts Protocol Checklist

## Student Agency and Personalisation

**Technology Selection** (Who selected what technologies are being used?)

STUDENTS

TEACHERS

BOTH

**Technology Usage** (who is the primary user of the technology)

STUDENT

TEACHERS

BOTH

# 4 Shifts Protocol Checklist

## Technology Infusion

(Mobile devices/online environments allow moving into higher gear vs pens & paper)

**Communication** (how are students Communicating?)

ALONE

IN PAIRS

IN TRIADS

IN GROUPS LARGER THAN THREE

**In Other Ways**

STUDENTS IN THIS  
SCHOOL

STUDENTS IN ANOTHER  
SCHOOL

ADULTS IN THIS SCHOOL

ADULTS OUTSIDE THIS  
SCHOOL

**Communication Technologies** (Is Digital being used to facilitate the communication?)

YES

NO

**Which ways**

WRITING

PHOTOGRAPHS AND IMAGES

CHARTS AND GRAPHS

INFOGRAPHICS

AUDIO

VIDEO

MULTIMEDIA

TRANSMEDIA



# 4 Shifts Protocol Checklist

## Technology Infusion

### Collaboration(How are Students working?)

ALONE

IN PAIRS

IN TRIADS

IN GROUPS LARGER THAN THREE

### With whom?

STUDENTS IN  
THIS SCHOOL

STUDENTS IN ANOTHER  
SCHOOL

ADULTS IN THIS  
SCHOOL

ADULTS OUTSIDE THIS  
SCHOOL

### Who is managing (collaborative process, planning, management, monitoring)

STUDENTS

TEACHERS

BOTH

# 4 Shifts Protocol Checklist

## Technology Infusion

### Collaboration Technologies

(Is digital used to facilitate the communication processes?)

YES

NO

SOMEWHAT

**Which ways?** (circle all that apply)

ONLINE OFFICE SUITE

EMAIL

TEXTING

WIKIS

BLOGS

PROJECT PLANNING TOOLS

VIDEOCONFERENCING

MINDMAPPING

CURATION TOOLS

OTHER

**Technology Adds Value** (Does Technology help students add value than without?)

YES

NO

SOMEWHAT

**Technology as Means, Not End** (Does Technology overshadow, mask, or draw focus from the important learning?)

YES

NO

SOMEWHAT

### Digital Citizenship

(Is digital used in both appropriate and empowering ways?)

YES

NO

SOMEWHAT

# Links

<http://dangerouslyirrelevant.org/>

<https://afedsquad.co.nz/ulearn19/>





**Thank you**  
**Tēnā koutou**  
**Fa'afetai lava**