



Beijing Advanced Innovation Center for Future Education

Future School 2030

**Digital Technology and Shifting Pedagogy
Towards Future Schools: a comparative
study**

An introduction

Ass/Prof Greg Shaw & Dr Jon Mason

January 15th 2017



Contents



01

Part one

Introduction



02

Part two

Research
Approach



Digital Technology and Shifting Pedagogy Towards Future Schools: a comparative study



PART 1

Introduction



PART 1

As teachers we have seen and experienced:

- the development of the transistor
- integrated circuits
- the personal computer
- the Internet

And we have moved from using:

- a blackboard with chalk
- the spirit duplicator
- overhead projector
- photocopier
- video camera and TV
- distributed print resources
- web 1.0
- web 2.0
- learning management systems



What is forming our research?

- Understanding where we are going with the use of technology in learning and teaching
- How lessons from the past can prepare us for future practice
- How experiences of others can impact practice

Key experiences and observations

- The shift to online resources and approaches for both learning & teaching:
 - Open Universities
 - CDU has 75% of its students online
 - The Northern Territory School of the Air/NT School of Distance Education
- The prevalence of Internet accessible and mobile devices with both teachers & students
 - not just at universities
 - children are bringing mobile devices to school
 - some schools require each child to have a laptop computer
- Shifts in pedagogy influenced by:
 - international benchmarking (e.g., PISA)
 - information society leading to knowledge society
 - Meta learning – learning how to learn –
 - constructivism and learning communities – connectivism




What will we research?

In preparing for a future driven by innovations with digital technology what differences in skills, attitudes, and practice do teachers from Darwin in Australia and Urumqi in China show?



Purpose

- Identify current availability of digital technology to teachers & students
- Identify current use of digital technology and ICT-based pedagogy by teachers and students
- Involve teachers in a structured process of critical reflection of their future practice involving digital technology & ICT-based pedagogy & what they could do to prepare for the rapidly changing world of classrooms & learning
- Develop a set of overarching strategies and imperatives to increase the uptake and use of digital technology and ICT-based pedagogy by teachers currently and working towards 2030.



We want to find out what teachers think about the role of technology in their current classrooms and where they think this might be heading in terms of future classrooms and their practices.

But we also want to have a look at what differences there might be between teachers in two quite different locations, Australia and China.



PART 2

Research Approach

- 
- **Commenced December 2016**
 - **Two remote populations – a comparative study**
 - CDU – Northern Territory, Australia
 - XNU – Xinjiang, China
 - **Qualitative study**
 - Mixed methods (surveys & focus groups)
 - Action research – critical reflection of practice and futures orientation
 - **Focus**
 - Trends & trajectories in digital learning
 - Shifting pedagogical requirements - the changing nature of teaching and learning
 - Impact on pre-service & in-service teachers
 - Skills, attitudes, & practices
 - Readiness – individual, organizational

Progress

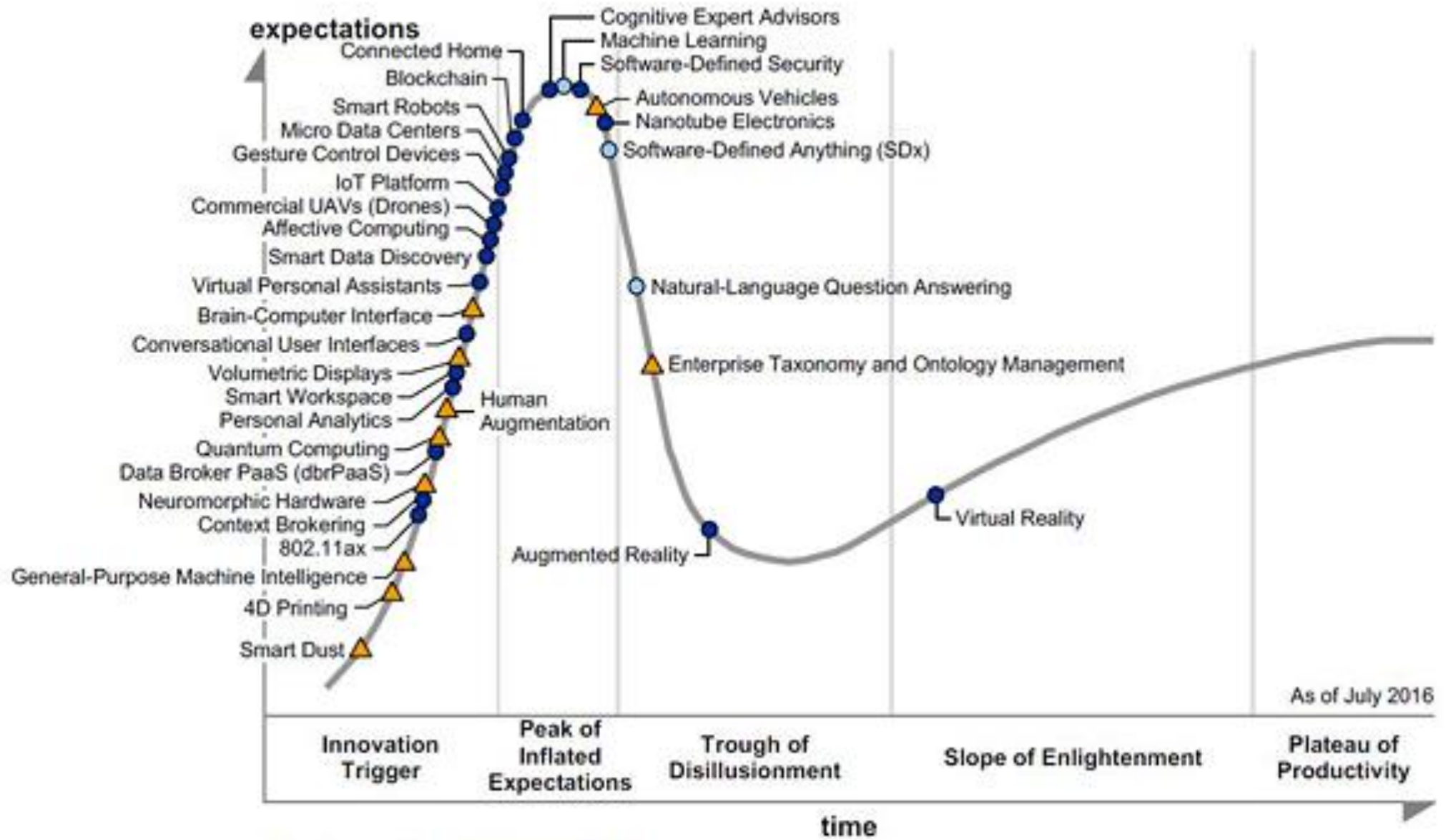
- **We are still at the early stages**
- **Workshops planned ~ 60 teachers x2**
 - CDU – Northern Territory, Australia
 - XNU – Xinjiang, China
- **Reviewing instruments and literature for framing educational technology futures**
 - Trend Reports (Horizon, Gartner, etc)
 - Scenario Planning
 - Futures Triangle
- **Question Formulation Technique**
 - Gathering relevant questions for the research and framing a questioning /enquiry approach
 - Questioning as a key role in learning



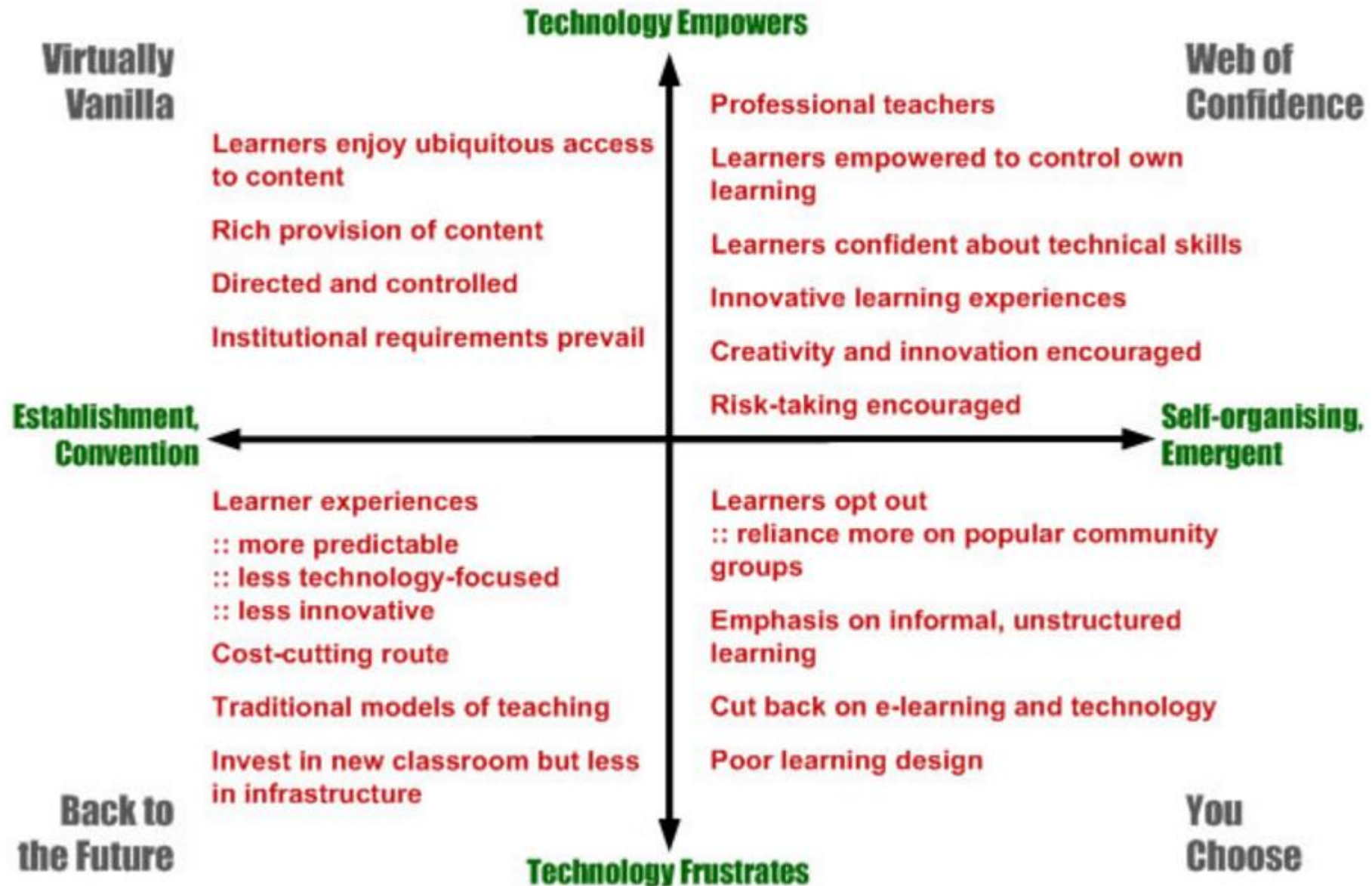
Hindsight

Insight

Foresight

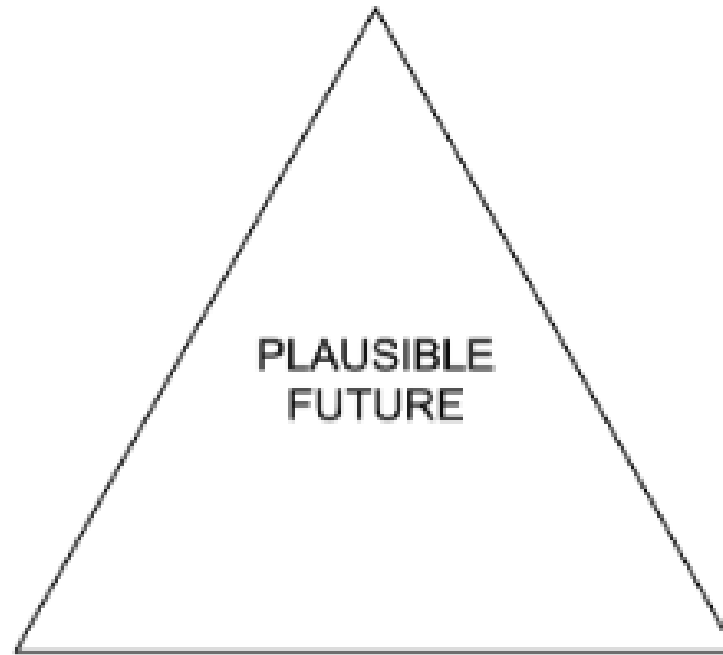


Scenario Planning | The Edinburgh Scenarios



The Edinburgh Scenarios on the Future of e-Learning (2004)

PULL OF THE FUTURE



PUSH OF THE PRESENT

WEIGHT OF HISTORY

The Futures Triangle (Inayatullah, 2008, p. 8)



Knowledge

Learning 学

Questioning 问

Knowledge 学问



Some Questions ...

- What can teachers do to prepare for ongoing transformation of the classroom by digital technology?
- How best can we respond as educators to the data-driven revolution as it gathers momentum?
- What skills & practices might be required of teachers & students in 2030?
- In what ways can questioning be scaffolded to align with the shift toward student-centred pedagogy?

The background features abstract, overlapping shapes in various shades of teal and blue. A large, light teal shape is on the left, overlapping a darker teal shape. These overlap a large, light blue shape that covers the right side of the image. The bottom left corner is white.

Thank you