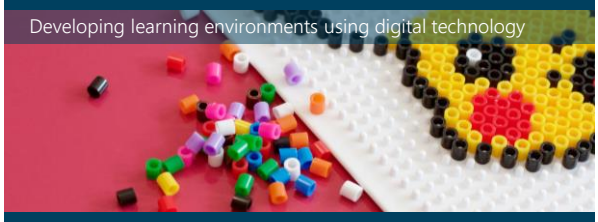
# World megatrends and education: developing learning environments using digital technology

Webb, Beata

# World megatrends and online education:

BOND UNIVERSITY

Developing learning environments using digital technology



Dr Beata Webb

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## A TREND

is an **important pattern** of social, environmental and economic activity that will play-out in the future.

## A Megatrend

- the intersection of many trends;
- is a **major shift** in environmental, social and economic conditions that will substantially change the way people live;
- relevant to contemporary decision making

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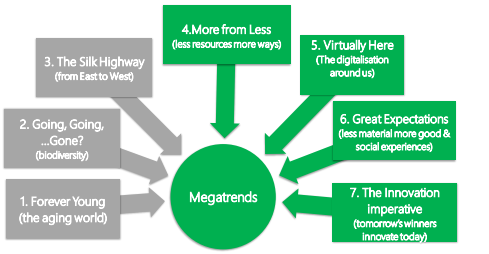
## World megatrends and online education

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## World megatrends and Bond TESOL online

| More from less | Virtually here | Great expectations | The innovation imperative |
|---|---|---|---|
| Access of the program across the globe | Program's digital resources via internet | It's more about the learning and social experience | Invest today or stay behind tomorrow |

TESOL ONLINE PROGRAM

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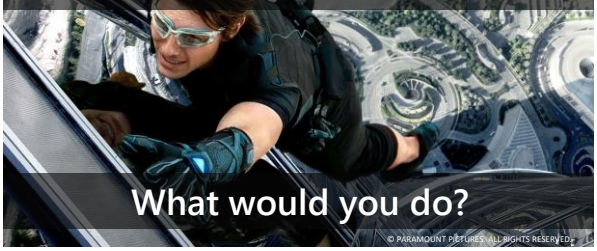
## Mission impossible:
## create MA TESOL online in 1 semester



## What would you do?



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BOND UNIVERSITY

## What is TESOL at Bond University, Gold Coast, Australia?

Graduate Certificate

Master of Arts

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1. My/our journey...
2. Distance or online?
3. All these Terms!
4. Theoretical framework
5. Building online environment
   - LMS
   - Asynchronous
   - Synchronous
7. Myths
8. Conclusions

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## 'Distant' is not a new concept...

- USA: 18th century Boston
- Australia: 1946 using Royal Flying Doctor Service for Schools of the Air
- Nearly twenty Schools of the Air covering 1.5mln square kilometers
- Digital age: virtual classrooms in real time

http://www.australia.gov.au/about-australia/australian-story/school-of-the-air

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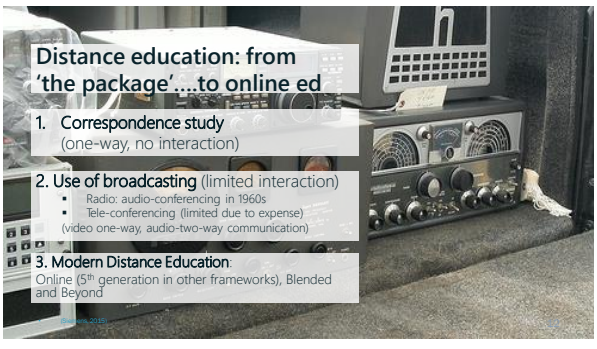


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## Distance education: from 'the package'....to online education

Taylor (2001) five distance education generations:

1. Correspondence model, based on print technology
2. Multi-media model, based on print, audio, and video
3. Tele-learning model, using telecommunications to provide synchronous communication
4. Flexible learning model based on Internet delivery
5. Intelligent, flexible learning model based on the interactivity of the Internet

(Siemens, 2015)

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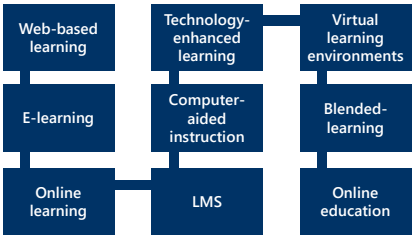
## Proliferation of terms




(Kovanovic et al, 2015)

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## Distance and online: what's the difference?

**Distance education:**

- teaching and planned learning
- teaching occurs in a **different place** from learning,
- requiring **communication through technologies** and special institutional **organization**

**Online learning:**

- A form of distance education
- where **technology mediates the learning process**,
- teaching is delivered completely using the **internet**,
- and students and instructors **are not required** to be available at the same time and place.

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## How I see it: DEFINITION of online education

- A form of distance education
- where technology mediates the learning process,
- Learning is flexible
- Flexible teaching is delivered completely using the internet,
- Flexible resources are developed through the collaboration between content, pedagogy, design and technology
- Flexible learning occurs both synchronously and asynchronously
- Flexible learning involves all forms of interaction
- Students and instructors are required to be available at the same time and place at least some parts of the course
- **Virtual face-to-face!**

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## In online education

- Alicia (Vallero, 2017; personal comment):
- ***We are back in the classroom then?***

- **Distance** is a different concept
- Learning in **synchronous** and **Asynchronous** environments
- More **learner-centred** (anytime, anywhere, any way)
- **Flexible** resources
- **Virtual face-to-face**

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## Pedagogy versus Technology: The Great Media Debate

- Does media influence learning?
- Is pedagogy all that counts?
- Pedagogy and technology debate

- Need for collaboration between approaches to pedagogies and technologies
- *We however found more principal factors.....*

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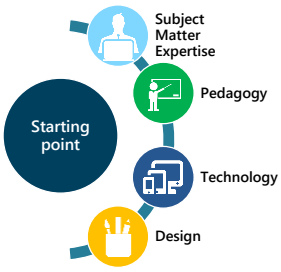


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## Building a learning environment:

- Organic holistic concept that embraces
- the learning taking place
- the setting: eco-system of learning that includes the activity and outcomes of learning

- The Learner:
- Experience/s
- Expectations
- Culture & values

([http://www.keepeek.com/Digital-Asset-Management/oecd/education/innovative-learning-environments_9789264203488-en#.WGiLYf96M8#page25](http://www.keepeek.com/Digital-Asset-Management/oecd/education/innovative-learning-environments_9789264203488-en#.WGiLYf96M8#page25); De Corte, 2010)

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## How to build the online environment?

**Theoretical framework: pedagogy**

1. Progression of thought and learning
2. Make it visual!
3. 'How do I know if I'm learning?': Gamify it!
4. The ADDIE Model

**Practical building blocks**

1. Learning Management System
2. Asynchronous learning environment
3. Synchronous learning environment

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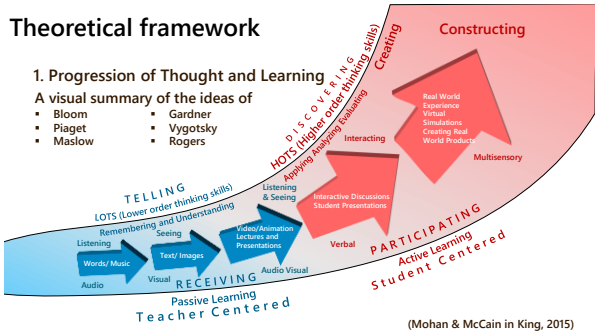
## Theoretical framework

### 1. Progression of Thought and Learning

A visual summary of the ideas of

- Bloom
- Piaget
- Maslow
- Gardner
- Vygotsky
- Rogers




(Mohan & McCain in King, 2015)

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## Theoretical framework

### 1. Progression of Thought and Learning

Development of Mental Processes

**Lower-order thinking skills**

- Telling
- Remembering & understanding
- Receiving
- Passive learning
- Teacher-centred

**Higher-order thinking skills**

- Discovering
- Applying, analysing, evaluating
- Participating
- Active learning
- Student-centred

(Mohan & McCain in King, 2015)

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## Theoretical framework

### 1. Progression of Thought and Learning

Development of activities that support learning

- Audio
- Visual
- Audio-visual

- Verbal
- Interacting

- Multisensory
- Real world experience
- Virtual simulations
- Creating real world products

(Mohan & McCain in King, 2015)

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## 2. Make it visual!

one beer please

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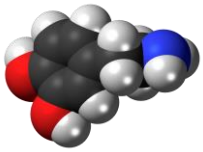
## 3. Gamify it!

- Danny: *How do I know if I'm learning?*
- Distraction! 'Not just the young ones' anymore…
- Zichermann: the gamification revolution
- Generation brought up on games
- Dopamine: a quick blood rush to the brain
- Learning: (instant) feedback, friends, fun



(Zichermann, 2014a, b)

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## Gamification and the new learner


Duolingo

- A free language learning app
- 2011: release of Duolingo, Luis von Ahn
- 2014 June: 30 million people learn languages (11million active)
- More than people studying than in the US school system

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## 4. Design of an Online Course: the ITERATIVE version of the ADDIE Model

generic instructional systems development process

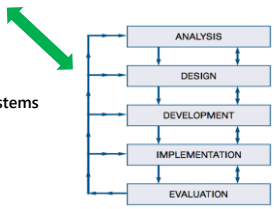


Figure 1. An ISD Model Featuring the ADDIE Processes (Source: Gratinger, 1988).

(Vallero & Webb, 2014)

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## The framework elements we used

- Theoretical principles:

1. Progression of thought and learning
2. Visual
3. Gamified
4. ADDIE: do it and…re-do it!

What do we do now?

- Building a learning environment

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## Building a Learning Management System

A learning management system (LMS) is a software application for

- supporting online, blended or face-to-face learning
- delivery of digital subject/program content,
- the administration,
- documentation,
- tracking, reporting and

- Blackboard, Moodle, WebCT, Canvas, MOOC platforms.

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## There is a LOT to choose from

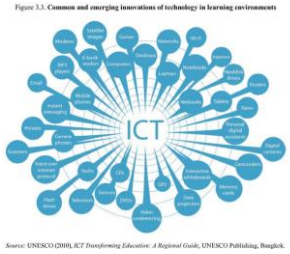


Figure 3.3. **Common and emerging innovations of technology in learning environments**

*Source:* UNESCO (2018), *ICT Transforming Education: A Regional Guide*, UNESCO Publishing, Bangkok.

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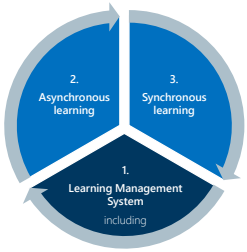
## Next.....Building online environment

**Asynchronous**
Teachers and learners are involved in the learning process at different times




**Synchronous**
Teachers and learners are involved in the learning process at the same time

Hrastinski in Webb, Vallero, King, Hunter, 2015

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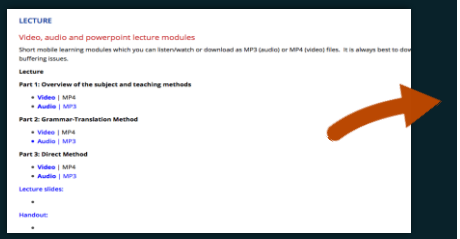
## 1. Building a Learning Management System (LMS): Alicia

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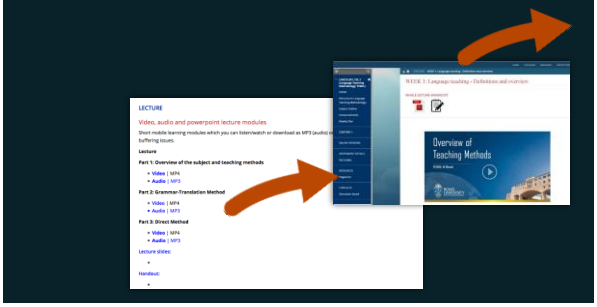
## Building a Learning Management System (LMS)

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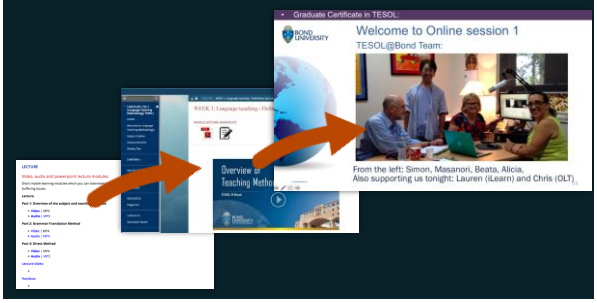
## Building a Learning Management System (LMS)

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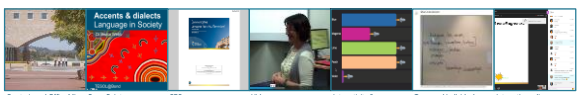
## Resources we are developing: a mixed bag




Camtasia and Office Mix Lectures
•video
•audio

PowerPoint
•text
•images
•hyperlinks

PDF
•text
•images

Video
•Classroom teaching

Interactivity & gamification
•Quizlet
•iLearn test tool
•Socrative

Team and Individual
•Student seminars
•Team & individual & research papers

Interactive online tutorials
•Blackboard Collaborate

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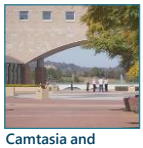
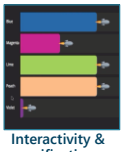
## 2. Asynchronous resources



Camtasia and Office Mix Lectures
- video
- audio

Other Video
- Classroom teaching



Interactivity & gamification
- *Quizlet*
- *Blackboard* test tool
- *Socrative*

PDF
- Lecture notes
- Lecture slides
- text
- images

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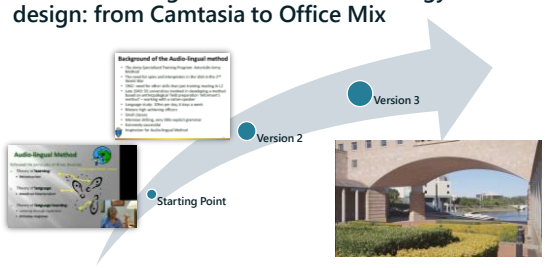
## 2. Asynchronous resources

### Video recordings: evolution in technology and design: from Camtasia to Office Mix

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## 2. Asynchronous resources: Chris


Quizlet, Socrative and Blackboard test tool

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## 2. Asynchronous resources

### 2. Pre-recorded content: What's Office Mix?

- Addressing learner engagement:
- Length of the video: ***how long do you think?***

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## 2. Asynchronous resources

### Length of the video

- Addressing learner engagement:
- MOOCS mega-data (6.9mln viewers)
- Length of the video: optimal 6min
- If longer than 9min, they don't finish watching it
- 3min: strongest engagement!
- Other studies: no longer than 10 min
- Many factors come to play

- (Guo, Kim, Rubin in Webb, Valliero, King, Hunter, 2015)

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## 2. Asynchronous resources

### Pre-recorded content: What's Office Mix?

- Addressing learner engagement:
- Length of the video: ***how long do you think?***
- Re-organisation of the content
- Camtasia was superseded in 2015 by the Office Mix, Add-on to PowerPoint 2013 and later
- Ease of use, very flexible, high selectivity, high interactivity, opportunity for learner-centredness

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Both: Asynchronous and synchronous resources

Un-death by PowerPoint:
(r)evolution in design: templates


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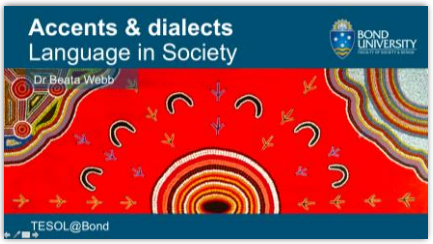
Both: Asynchronous and synchronous resources

Un-death by PowerPoint:
(r)evolution in design: templates

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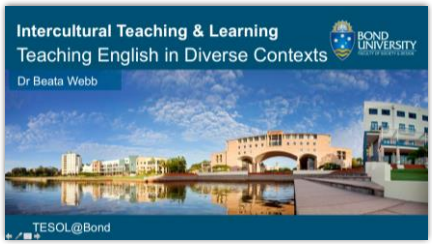
Both: asynchronous and synchronous resources

Un-death by PowerPoint: templates

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Both: asynchronous and synchronous resources

Un-death by PowerPoint:
(r)evolution in design: templates


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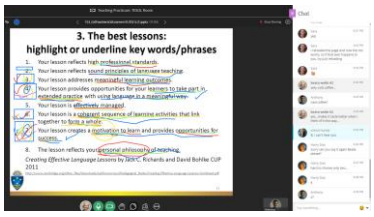
3. Synchronous environment

- Blackboard Collaborate
  - From Classic
  - To ULTRA

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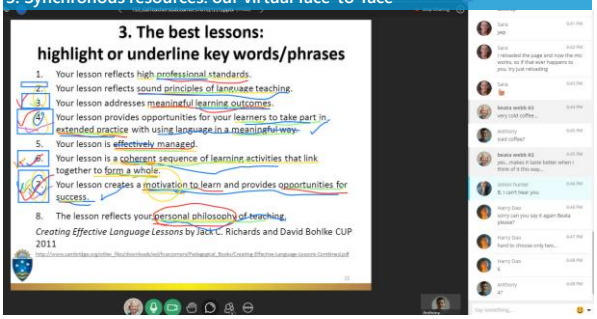
3. Synchronous resources: our virtual face-to-face

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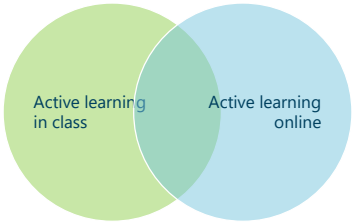
## 3. Synchronous resources: our virtual face-to-face

**Blackboard Collaborate:**
our virtual classroom

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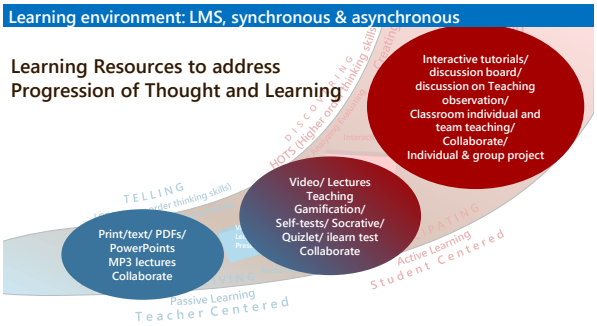
## Learning environment: LMS, synchronous & asynchronous

**Learning Resources to address Progression of Thought and Learning**

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## Ideally then, online education will mean

- Well-designed courses
- Interactive & engaging content
- Structured collaboration between peers
- Flexible deadlines to allow students to pace their learning
- Continuous monitoring of student progress
- The provision of formative feedback when needed

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## What to do to improve the learning experience: research overview

- Good support for student-student & student-content interactions (more in online...part of a team)
- Co-operative & collaborative learning
- Fostering interactions via structured online discussions
- Instructor's moderating role in guided discussions important
- Timely feedback
- Instructional scaffolds according to student needs
- Content should be visually engaging and interactive

(Joksimovic et al 2015; 32 reviews of studies of reviews)

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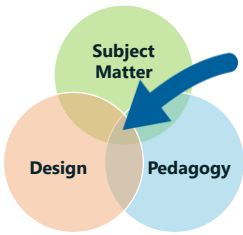
## Mission accomplished (so far...)




**Learning and teaching resources for learner diversity that maximise student engagement and learning.**

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## Breaking the myths on online learning: unicorns

1. *When do I get my package?*
2. Students are isolated
3. Teaching is robot-like
4. Technology gaps make it hard for students
5. Younger students have better digital skills
6. Online courses are all the same
7. Cost of training instructors is very high
8. You have to be online all the time
9. Students don't have to work so hard: *your degree is just a click away*

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## Students' perspective: YOU NEED A TEAM!

- Well-designed frequently updated courses
- With motivating factors: tasks/examples relevant to practice
- Reasonable level of control and flexibility
- Support to collaborate with peers
- High level of instructor involvement & feedback

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## Where are we now:
collaborative iterative teamwork process

- An ongoing development

and

- Redevelopment project

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## What makes great teaching?

| Great teaching!!! | Traditional classroom | Virtual classroom |
|---|---|---|
| Pedagogical content knowledge | YES! | YES! |
| Quality of instruction | YES! | YES! |
| Classroom climate | YES! | YES! |
| Classroom management | YES! | YES! |
| Teacher beliefs | YES! | YES! |
| Professional behaviours | YES! | YES! |

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## 5 tips from Pokemon Go!

1. It's digital, game-based, social AND viral AND...amazing
2. It's seriously sticky - with incremental rewards and levels
3. It's easy!
4. Set 'em up, and let 'em go.
5. It's a real treasure hunt
6. It had some near-misses!

http://www.kineo.com/au

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## The greatest surprise of all:

- **It's personal!**
- It's just as hard or harder than face-to-face…
- But you are part of a very strong community
- Success is *a few clicks away* ☺

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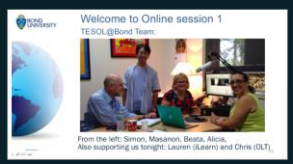
## THANK YOU FOR LISTENING




Dr Beata Webb
Bond University
Gold Coast, Australia

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