World megatrends and education: developing learning environments using digital technology

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In 2014 I went to Dr Stefan Hajkowicz's lecture at International Education Conference in Brisbane.

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

A Trend

- 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.

World megatrends and online education:

1. Forever Young (the aging world)
2. Going, Going, ...Gone? (biodiversity)
3. The Silk Highway (from East to West)
4. More from Less (less resources more ways)
5. Virtually Here (The digitalisation around us)
6. Great Expectations (less material more good & social experiences)
7. The Innovation imperative (tomorrow’s winners innovate today)

World megatrends and online education: Developing learning environments using digital technology

Dr Beata Webb


▪ 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.

World megatrends and online education

TESOL ONLINE PROGRAM

Mission impossible: create MA TESOL online in 1 semester

What would you do?
What is TESOL at Bond University, Gold Coast, Australia?

Graduate Certificate
Master of Arts

Our journey...

What is ‘distance education’?
What is ‘online education’?

‘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

Distance education: from ‘the package’...to online ed

1. Correspondence study
   (one-way, no interaction)

2. Use of broadcasting (limited interaction)
   - Radio: audio-conferencing in 1960s
   - Tele-conferencing (limited due to expense)
     (video one-way, audio-two-way communication)

3. Modern Distance Education
   Online (5th generation in other frameworks), Blended and Beyond
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

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
  - Students and instructors are not required to be available at the same time and place

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

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

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....
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

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

Theoretical framework
1. Progression of Thought and Learning

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

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

Development of activities that support learning
- Multisensory
- Real world experience
- Virtual simulations
- Creating real world products

Theoretical framework
1. Progression of Thought and Learning

- Audio
- Visual
- Audio-visual
- Verbal
- Interacting
2. Make it visual!

one beer please

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)

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

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

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.
There is a LOT to choose from

Next…..Building online environment

1. Asynchronous learning
2. Synchronous learning

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

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

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

Building a Learning Management System (LMS)

Resources we are developing: a mixed bag
2. Asynchronous resources

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

- 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

Starting Point

Version 2

Version 3

2. Asynchronous resources: Chris

Quizlet, Socrative and Blackboard test tool

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 6min, they don't finish watching it
- 3min: strongest engagement!
- Other studies: no longer than 10 min
- Many factors come to play

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

Both: Asynchronous and synchronous resources

3. Synchronous environment

- Blackboard Collaborate
  - From Classic
  - To ULTRA
3. Synchronous resources: our virtual face-to-face

Blackboard Collaborate: our virtual classroom

Active learning in class

Active learning online

Learning environment: LMS, synchronous & asynchronous

Learning Resources to address Progression of Thought and Learning

- Interactive tutorials/discussion board/discussion on Teaching observation/Classroom individual and team teaching/Collaborate/Individual & group project
- Video/Lectures/Teaching Gamification/Self-tests/Socrative/Quizlet/ilearn/Teaching Collaborate
- Print/text/PDFs/PPT lectures/Collaborate

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

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

Mission accomplished (so far...)

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

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
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

Where are we now:
collaborative iterative teamwork process

- An ongoing development and
- Redevelopment project

What makes great teaching?

<table>
<thead>
<tr>
<th>Great teaching!!!</th>
<th>Traditional classroom</th>
<th>Virtual classroom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedagogical content knowledge</td>
<td>YES!</td>
<td>YES!</td>
</tr>
<tr>
<td>Quality of instruction</td>
<td>YES!</td>
<td>YES!</td>
</tr>
<tr>
<td>Classroom climate</td>
<td>YES!</td>
<td>YES!</td>
</tr>
<tr>
<td>Classroom management</td>
<td>YES!</td>
<td>YES!</td>
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<td>Teacher beliefs</td>
<td>YES!</td>
<td>YES!</td>
</tr>
<tr>
<td>Professional behaviours</td>
<td>YES!</td>
<td>YES!</td>
</tr>
</tbody>
</table>

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!

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 😊

Thank you for listening

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