National Teaching Fellow 2012

EDEN fellow 2013

Ascilite fellow 2012

Perspectives on Learning Design

Gráinne Conole

6th December 2017, Aarhus






e4innovation

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E-learning innovation: research, evaluation, practice and policy…

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Welcome to e4innovation

Gráinne Conole is an e-learning expert and consultant with a range of research interests in the use of digital technologies for learning, teaching and research. She can undertake commissioned reviews and reports, run workshops, and provide tailored e-learning support and advice.

Click here to find out more…

e4innovation.co.uk

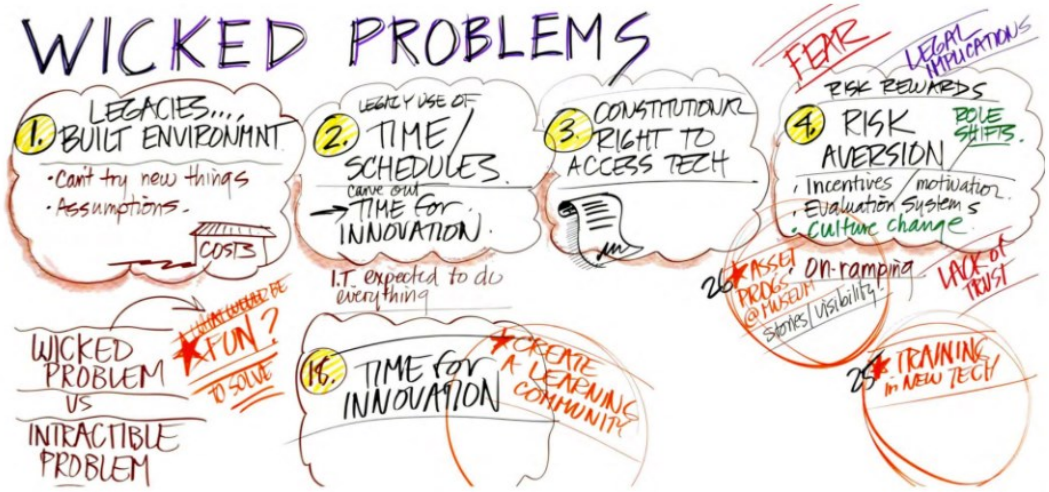
Outline

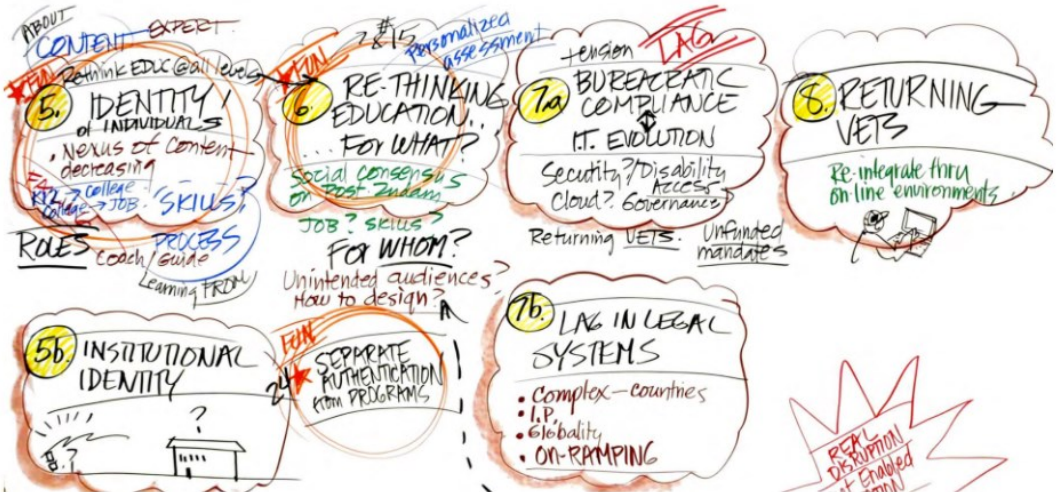
- Wicked problems in education
- Trends in education
- Augmenting face-to-face
- A TEL solution
  - Learning Design
  - Learning Analytics
- Conclusion

Horizon summit: future of education

- Challenges mean:
  - Rethink what it means to teach
  - Re-image online learning
  - Allow productive failure
  - Innovate as part of the learning ethic

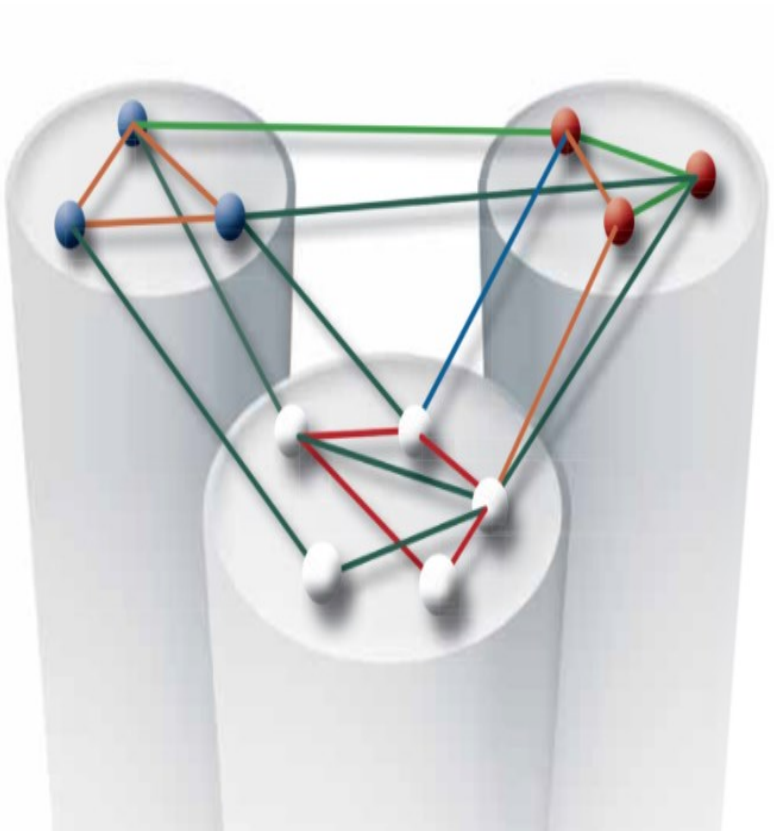
http://bit.ly/2ukx7WH





Wicked problems in Education

- Technology
  - Gap between the promise and the reality
- Digital literacies
  - Teachers and learners lack digital literacies
- Teaching strategies
  - Learners will be doing jobs that don't even exist today
  - Shift from knowledge recall to competences
  - Develop metacognition and learning to learn



http://brook.gs/2tUwNNd

Skills for the future: http://bit.ly/2j7sNGc

The future of learning

- Competences
  - Critical thinking
  - Problem solving
  - Team work
  - Communication
  - Collaboration
  - Meta cognition
  - Networking
  - Creativity
  - Reflexivity
  - Flexible

http://www.rockyview.ab.ca/21stC/learning/competencies

Digital Literacies

- Evaluation
- Transmedia navigation
- Multitasking
- Distributed cognition
- Networking
- Visualisation
- Metaphors
- Collective intelligence
- Play
- Digital identity management

Jenkins, JISC

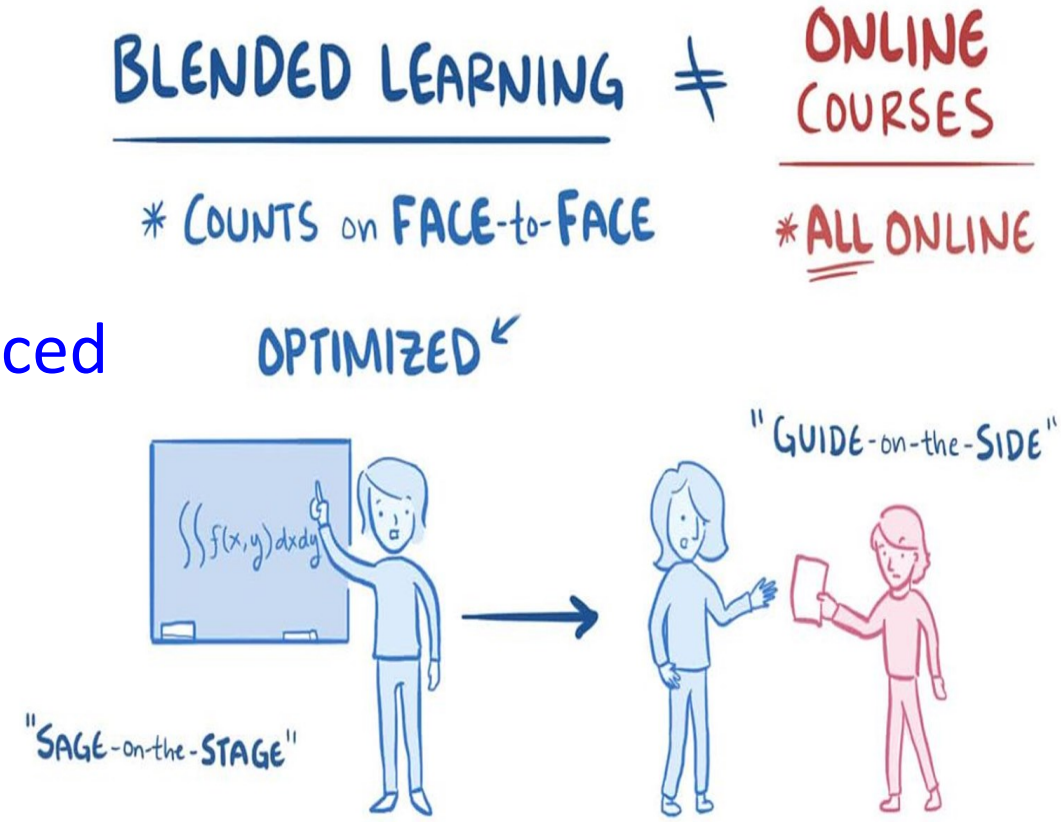
7 critical skills for the future

- Context
  - World of accelerated change
  - 65% of jobs of the future don't exist
  - Technological automation
- Skills
  - Critical thinking and problem solving
  - Collaboration across networks
  - Agility and adaptability
  - Initiative and entrepreneurship
  - Oral and written communication
  - Assessing and analysing information
  - Curiosity and imagination

http://bit.ly/2Abpp4E

Augmenting face-to-face

- Three main ways
  - Blended
  - Flipped
  - Technology-enhanced



http://bit.ly/1pZz0il

12 Types of Blended Learning

1 Outside-In

2 Supplemental

3 Insic - Out

Blended Learning 2.0

The merging of physical & digital learning spaces to complement one another to personalize the learning of all students based on authentic human circumstance and prevailing local technology.

-Terry Heick

TeachThought

4 Flex

5 Lab Rotation

6 Station Rotation

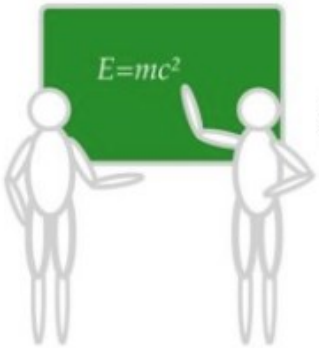
7 Individual Rotation

8 Self-Directed

9 Project-Based

10 Remote

11 Flipped Classroom



12 Mastery-Based

http://bit.ly/2BHTTZ4

The flipped classroom

- Students engage with content before the class
  - Video, podcasts etc.
- Teacher poses questions about the content
- Classroom is student-centred and active

https://www.youtube.com/watch?v=26pxh_qMppE&feature=youtu.be

Benefits for the teacher

- Can see students at work interacting with others
- Frees time to help students during class
- Identify struggling students
- Provide more personalised attention

Benefits for the students

- Shift from passive consumer of information to active learning
- Can work at their own pace
- Have more control of learning whilst watch videos, can stop and re-watch or skim through
- More peer interaction
- More engaging and motivating

Technology-Enhanced Learning Spaces

- Design face-to-face to maximise use of technology
- Enables BYOD
- Principles
  - Comfort
  - Aesthetics
  - Flow
  - Equity
  - Blending
  - Affordances
  - Repurposing

http://www.skgproject.com/

Teachers

Lack the digital literacies needed to harness potential of digital technologies

Learning Design

New approaches to design that are pedagogically based and make effective use of technologies

Learning Analytics

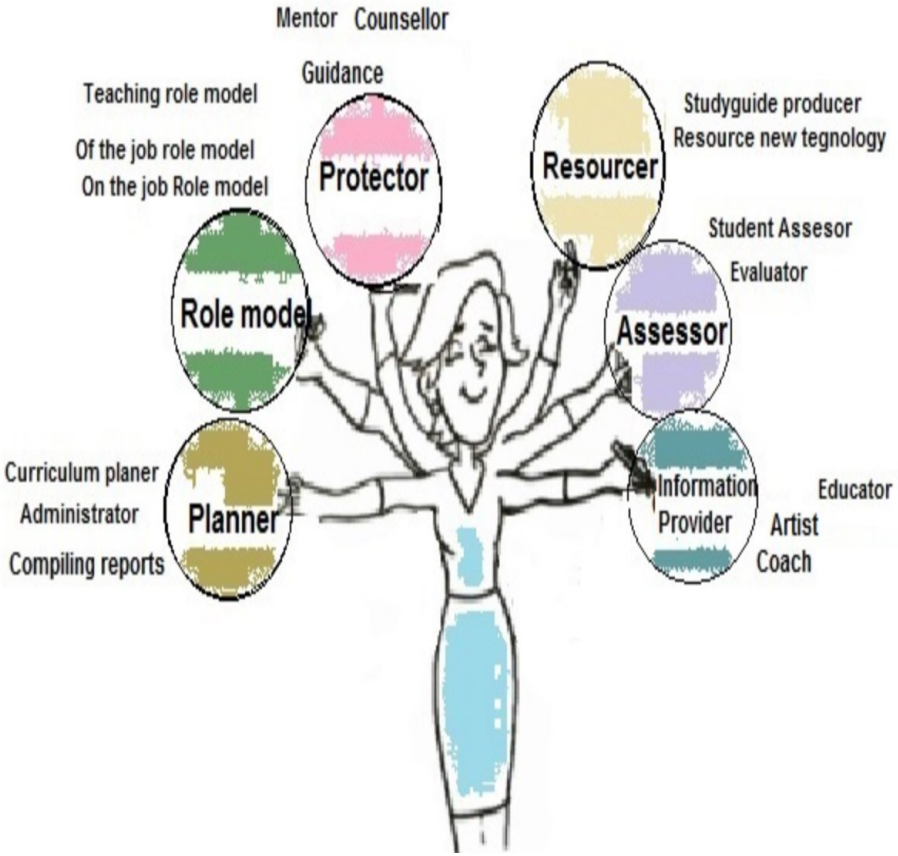
Analysis of VLE data to better understand how learners are learning and to improve learning and teaching

Learners

Lack academic digital literacies and need to develop strategies for learning

Role and skills of teachers

- Design is messy, iterative and creative
- Teachers lack time and skills to innovative
- Tension of research vs. teaching
- Focus on content and own experience
- Want examples of good practice
- Frame and guide the learning experience (design, facilitate and assess)



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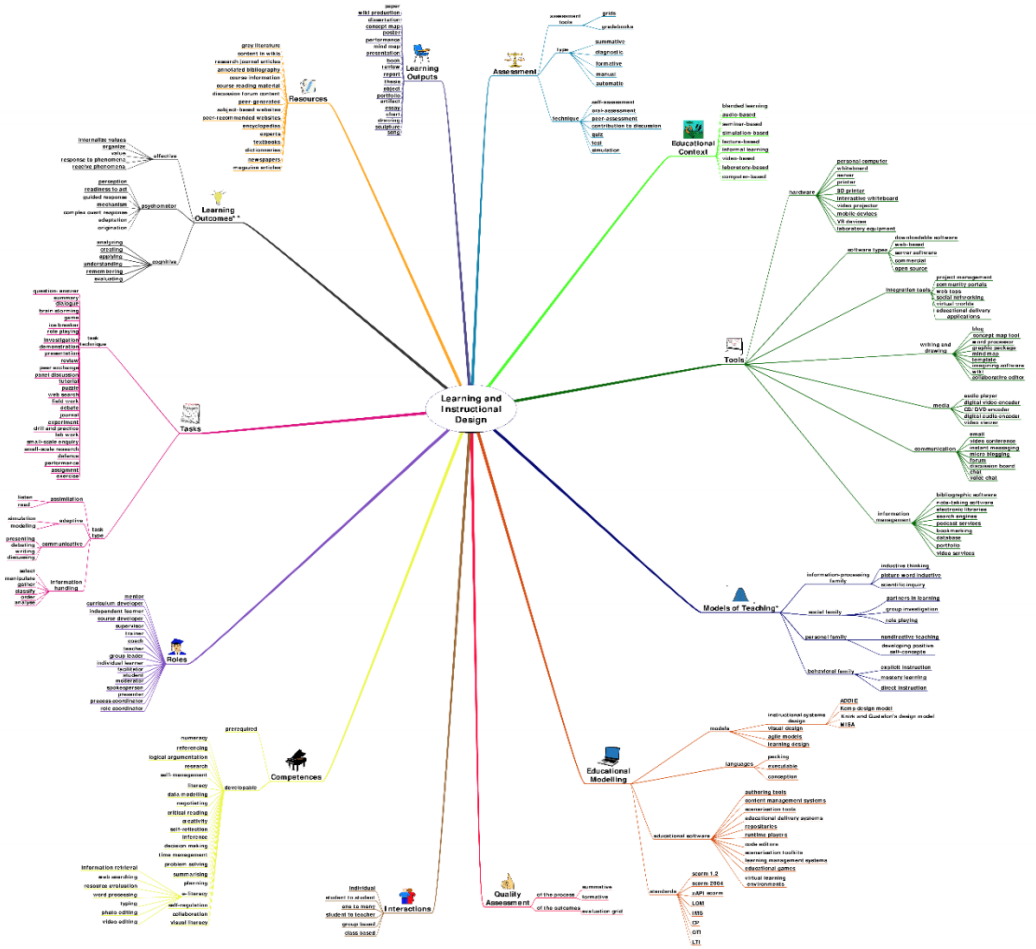
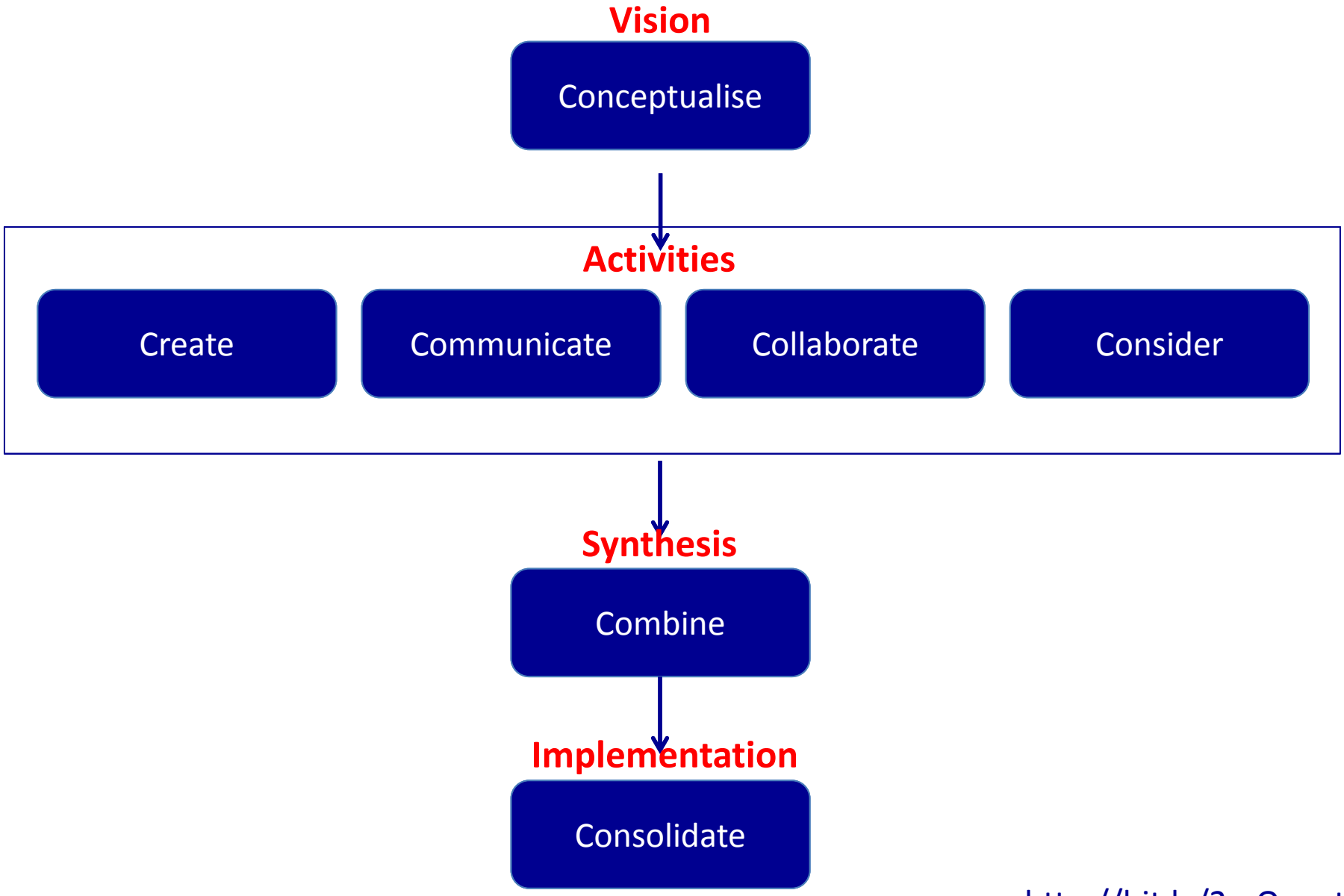
Components of a learning activity

- Tasks
- Learning outcomes
- Roles
- Assessment
- Tools
- Resources
- Outputs
- Pedagogies
- Interactions
- Competencies



http://tecfa.unige.ch/tecfa/maltt/memoire/Forero2017.pdf

Learning Design



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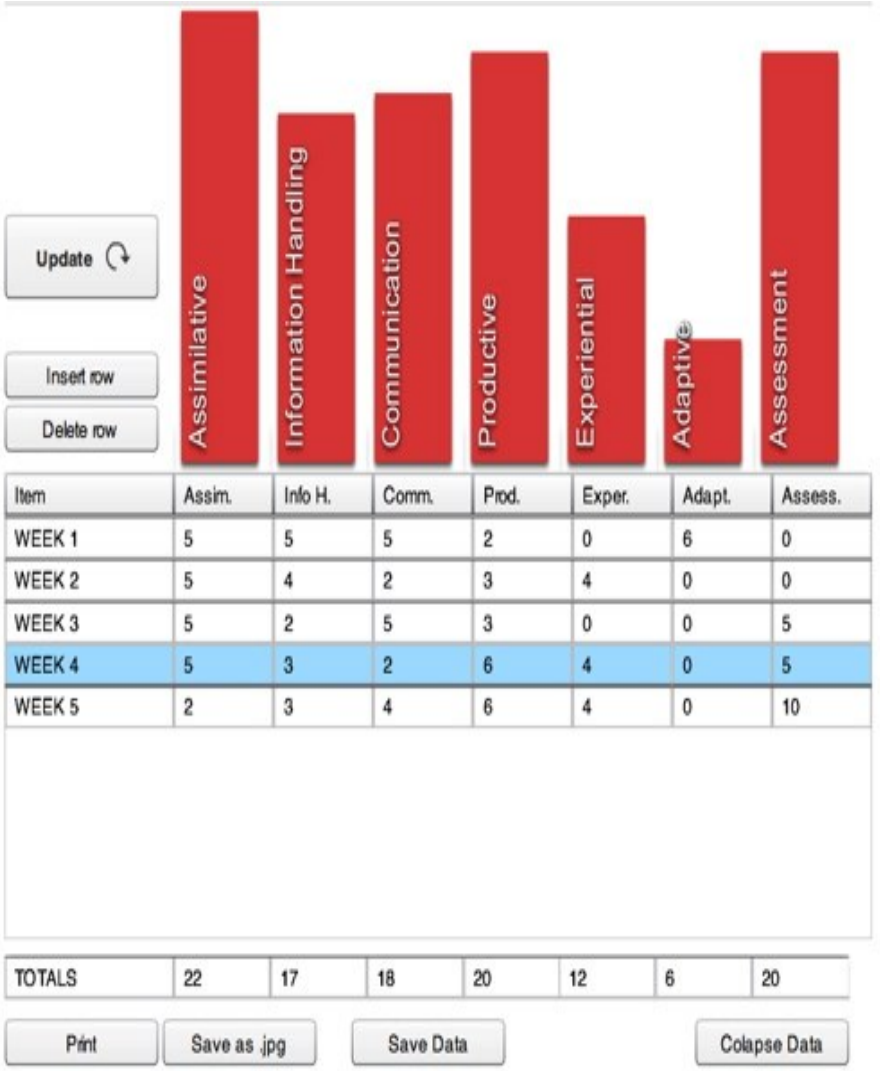
Course features

- Principles
- Pedagogical approaches
- Guidance and support
- Content and activities
- Communication and collaboration
- Reflection and demonstration

cloudworks.ac.uk/cloud/view/5950

Activity Profile

- Assimilative
- Information Handling
- Communicative
- Productive
- Experiential
- Adaptive
- Assessment



Item	Assim.	Info H.	Comm.	Prod.	Exper.	Adapt.	Assess.
WEEK 1	5	5	5	2	0	6	0
WEEK 2	5	4	2	3	4	0	0
WEEK 3	5	2	5	3	0	0	5
WEEK 4	5	3	2	6	4	0	5
WEEK 5	2	3	4	6	4	0	10
TOTALS	22	17	18	20	12	6	20

Micki Chi's ICAP framework

Chi, M. T. H. (2009). Active-Constructive-Interactive: A conceptual framework for differentiating learning activities. *Topics in Cognitive Science, 1, 73-105.*

Student engagement activity	e.g., history	e.g., algebra equations	Effectiveness
Passive	Reading the text	Reading an example	Worst
Active	Highlighting the text	Copying an example	OK
Constructive	Answering questions	Solving a problem	Better
Interactive	Discussing questions with a peer **or tutor**	Solving a problem with a peer **or tutor**	Best

I > C > A > P

Learning Analytics

Summative (teachers)

- See what learners are doing
- Identify learners who are struggling
- Find concepts that learners find difficult
- Provide targeted support

Formative (learners)

- See patterns of their learning
- Receive advice on better learning strategies
- Compare learning against classmates
- Set/review learning goals

http://bit.ly/2ukJRwb

The digital advantage

Teachers

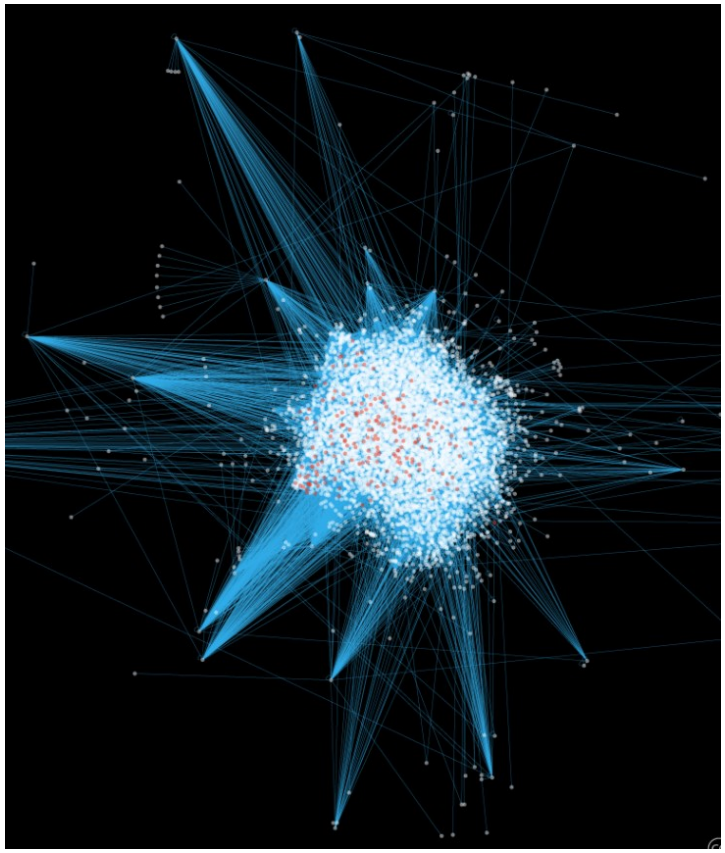
- Guided design
  - Innovative interventions
  - Enhance learner experience
  - Visualise and share designs
- Collate
  - Build up a bank of best practice
- Improve learning and teaching

Learners

- Support
  - Represent their learning
  - Improve learning strategies
  - Develop lifelong learning skills
- Process
  - Document and evidence their learning and progression

Conclusion

- Need
  - Rigorous approaches to learning design
  - To harnessing learning analytics
- Unbundling of education
  - Content
  - Support
  - Learning pathway
  - Accreditation
- Implement innovative pedagogies that:
  - Support self-reliance, resilience, agility, adaptability
  - Encourage meta-cognition and reflection
  - Utilize the affordances of digital technologies
  - Enable technology-enhance learning spaces
  - Develop competencies to deal with an unknown future



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