Digifest
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Active classrooms enabling global collaboration: New pedagogies for TNE 4.0?

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"As a team, design a family garden in a country you do not know much about"

(20 mins exercise)
Questions / Reflexion

Did you actively engage in a small group learning activity?

Cooperative Learning (Social constructivism) – 1980s in HE

Did you investigate aspects of the country in the exercise?

Inquiry (enquiry) based learning – 1960s

Did you design anything?

Guided design (Design-based learning) – West Virginia University – late 1970s
Questions / Reflexion

Did you undertake a role or persona?

Role playing – 1980s in HE literature

Did you use a device or pc to investigate the problem?

Computer based instruction? (TEL?) – 1980s

Did you learn anything new from your colleagues/team?

Peer instruction – 1970s
Questions / Reflexion

How did your colleagues engage with the activity? How did you engage?

Reflective learning (also metacognition) – 1980s (Kolb etc)

Does anyone feel like googling garden designs in ‘their’ country a bit more?

Student inspiration! (Happy teacher)

Is anyone quitting to become a landscape gardener?

Deep experiential learning! – 1930s (John Dewey)
All these examples are classed as active learning!

“Active inquiry, not passive absorption, is what engages students. It should pervade the curriculum”
(Johnson et al. 1989, p. 68).

“Students learn both passively and actively. Passive learning takes place when students take on the role of "receptacles of knowledge"; that is, they do not directly participate in the learning process....Active learning is more likely to take place when students are doing something besides listening”
(Ryan and Martens 1989, p. 20).

A019 – Engineering Central
Growing Comms

Growing Regional Outputs With Innovative Next Generation Communications
Invent for the Planet

At a Glance ...
Teams of 4-6 students
48 hours to develop a unique solution complete with prototype, technical white paper & elevator pitch
Connect & collaborate with teams around the world
Expert mentors from academia & industry
Texas A&M
ENGR 410 – Global Engineering Design

Global Competencies
Virtual Collaboration
Engineering Design Process

Students are placed in multi-national teams (Brazil, France, Wales, USA)

Present Project Solution

Engineering Project from a Company
Global Competencies
- Intercultural sensitivity
- Global Mindset
- Dimensions of culture

Virtual Collaboration
- Zoom
- Google
- Email
- MS Teams
- Slack
- ...

Engineering Design Process
- Design Thinking
- Gaining Knowledge
- The voice of experts
- Innovation & idea generation
- Design process step
Conclusions

- Opportunities to change arising from technological advances have a limited time window – we need to use TNE 4.0 wisely.

- An opportunity to transform current practice is here now.

- Connected learning communities can (and need to) change the world.
(Debate or Drama)