TILT Festival of Learning

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Clifton Campus,

Nottingham Trent University

Developing graduate 'durable skills' using game-based teaching and learning approaches

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2018/2019 TILT Sabbatical Winners

Overview of this workshop

1. Introduction –

   - The world of work is changing
   - What are durable skills?

2. Description of 'Creative Connections'

3. How might 'Creative Connections' be used to develop 'durable skills'?

   - Linking course content with durable skills – activity

4. Conclusions

Setting the stage: The Rise of the Fourth Industrial Revolution

- The Future of Skills – In the Age of the 4th Industrial Revolution report by Design2Learn (D2L, 2019)

- Skills shift driven by automation, technology including artificial intelligence (AI)

In 2018, Bloomberg surveyed 200 senior-level individual, 100 each in academic and business, focusing on four primary themes: Preparedness, Skills, Collaboration and Planning.

The results

Business	**Academic institutions**
65% reported graduates unprepared in some way; The most significant area in which graduates were lacking was in 'soft skills' **34**%	**56**% reported graduates unprepared in some way; The most significant area in which graduates were lacking was in 'soft skills' **44**%

The D2L (2019) report, suggests that the current systems of learning (including Higher Education) are not adequately addressing the durable skills needs of all students. It issues a challenge to Higher Education to develop students durable skills, for just for now, but for the future.

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skills needs of all students. It issues
to develop students durable skills

The questions is, how can we develop 'durable' skills when most students find them boring to do?
We have an answer!

What are 'Durable' skills?

Durable skills are the cognitive and non-cognitive skills necessary to engage in, interact with, and adopt to any work environment. (D2L:3)

Durable skills include:

Critical thinking, creativity, adaptability, emotional intelligence, and global competencies etc.

Global Competencies are defined as: "the capacity to examine local global and intercultural issues, to understand and appreciate The perspectives and world views of others, to engage in open, appropriate and effective interactions with people from different cultures, and to act for collective well-being and sustainable development."

Why develop this resource?

- Taught largely in modular systems

- Students (u/g and p/g) – pragmatic

- Tendency for "silo" learning

How can we do this?

- Structured way to encourage the break down of silo learning

- Help students recognise (common) skills
- Encourage deeper thinking
- Active GBL - engagement

Modular course content

' Creative Connections'

Wanted a resource that is:

- Flexible – adapt to different courses/ different levels

- Easy to implement for the tutor

- Look at a copy of the resource

          Cradle

          Connection (rubber) bands

          Connect dice

          Adaptable topic insert

          Rules/Tutor notes

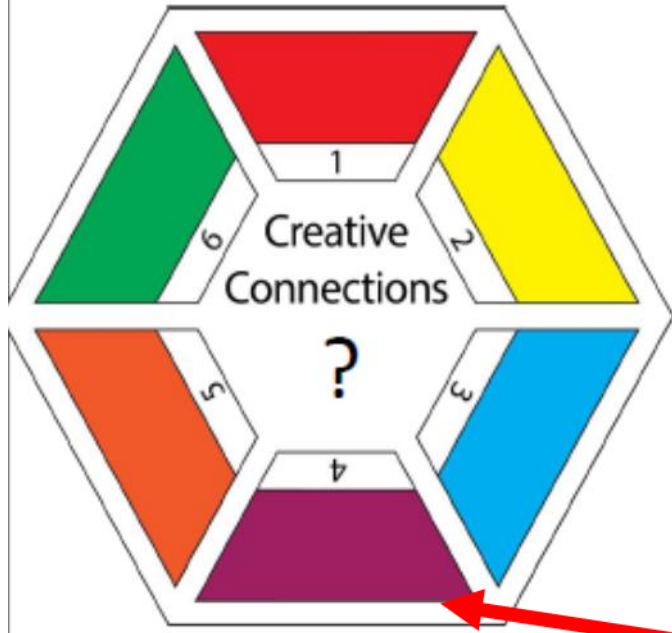- ▶ How to use………

- ▶ Game-mode possibilities

- • Dice 'choose' topics to link
- • Small groups
- • Two-team competitive
- • Individual
- • Scoring system
- • Round-the hexagon
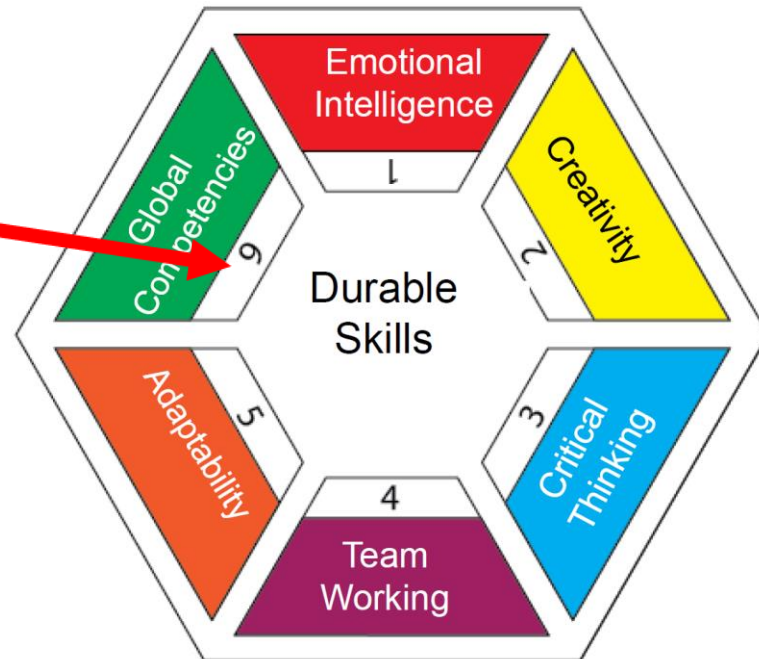
- ▶ Engagement/active learning

- ▶ Peer-learning

Two inserts used together

- link between
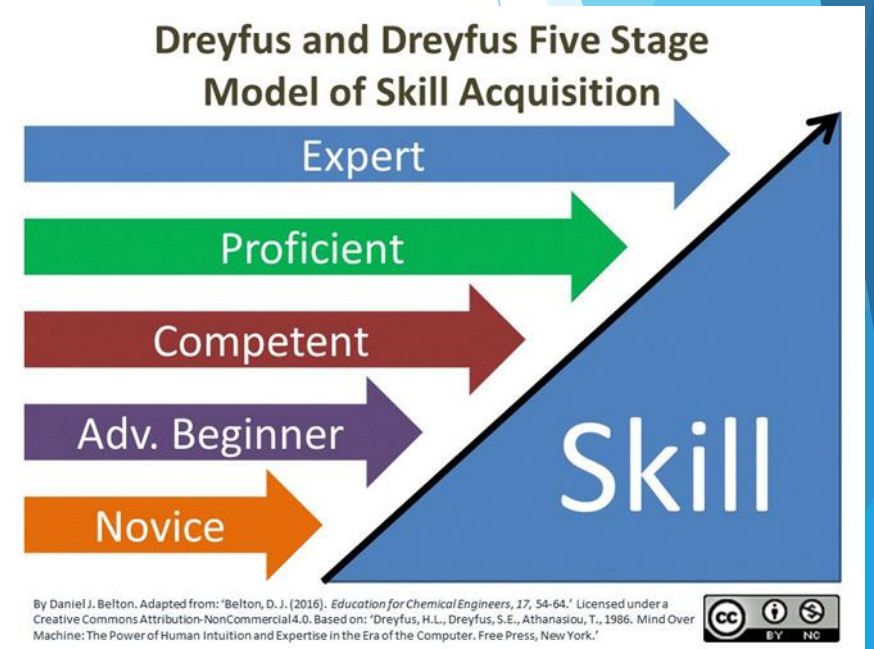modules and durable skills

Module title

Durable skills

Now it is your turn!

Linking academic topics to durable
skills- activity for participants

Designing your Creative Connections inserts (ca. 5 minutes)

1. (Roughly) draft a set of up to six modules on your course to populate the outer six coloured zones of a 'Creative Connections' hexagon

2. We have pre-prepared another insert with 'durable skills' examples.

3. Now consider: do you expect connections to be made between your modules and durable skills?

4. Now think about how you would intervene in class to help students recognise the skills they are developing.

5. Now think of how you can use aspects of your module to allow students to improve their durable skills appropriately.

Dreyfus and Dreyfus Five Stage Model of Skill Acquisition

Expert
Proficient
Competent
Adv. Beginner
Novice

Skill

By Daniel J. Belton. Adapted from: 'Belton, D. J. (2016). *Education for Chemical Engineers, 17*, 54-64.' Licensed under a Creative Commons Attribution-NonCommercial 4.0. Based on: 'Dreyfus, H.L., Dreyfus, S.E., Athanasiou, T., 1986. Mind Over Machine: The Power of Human Intuition and Expertise in the Era of the Computer. Free Press, New York.'

Conclusions

We have:

Been introduced to a learning resource: Creative Connections
    Flexible/adaptable
    Active learning tool
    Easy-to-implement

Designed 'Creative Connections' inserts.

There are different approaches for class-room use:
    Full/part session
    Single/multiple inserts
    Game-mode/directed discussion mode

Get your students working in class – Yes!
Increase student engagement – Yes!
Achieve deeper learning – Yes!

Then you need to use the
Creative Connections learning tool in your teaching.

the tool that helps you learn!

Can be used on any topic at any level!

You can book copies of the tool or if you would like to see a demonstration of the tool, then email
james.leinster@ntu.ac.uk or
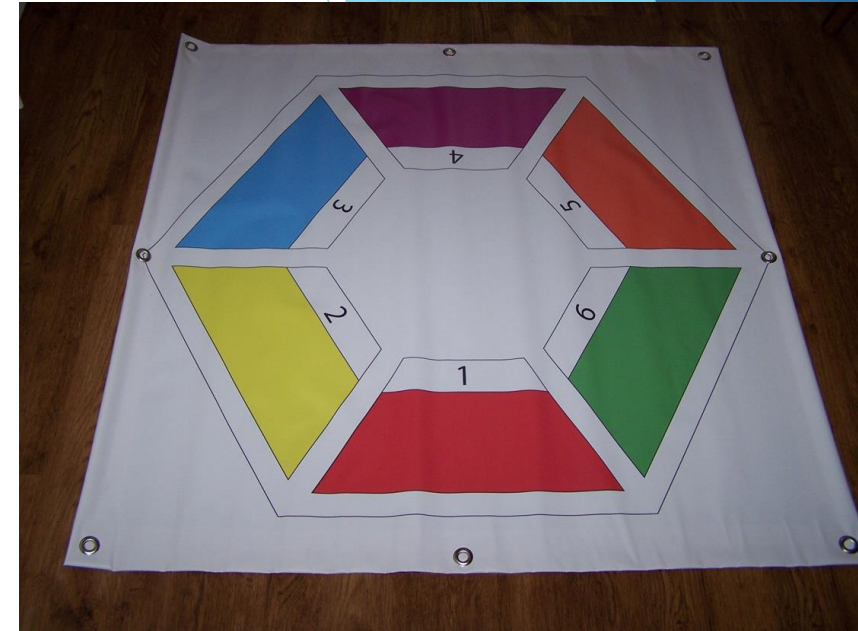*michael.coffey@ntu.ac.uk*

Thanks for your attention!

Interested in using Creative Connections in your class?

Contact:
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0115 8483149

james.leinster @ntu.ac.uk
0115 8488025

Supply insert template
    Discuss structuring insert
        Discuss ideas on classroom use

    Option for pedagogic study on usefulness of resource